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Assessment and Catalog of Benthic Marine Algae from the Alaska Peninsula

May 2016

M. R. Lindeberg and S. C. Lindstrom

February 2019

U.S. DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Alaska Fisheries Science Center

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PREFACE

This publication represents one aspect of a larger collaborative effort to survey coastal resources along the Alaska Peninsula during May of 2016. Aerial imaging surveys were conducted for *ShoreZone* coastal habitat mapping and ground surveys for detailed assessments of geomorphology and marine species assemblages. As a result of this effort an incredible amount of baseline information has been gathered for this remote and poorly studied stretch of coastline. This assessment and collection of benthic marine algae including an extensive digital catalog is the only one of its kind to date and will be an important resource for researchers and resource managers. Support for this body of work was provided by Cook Inlet Regional Citizens Advisory Council, NOAA's National Marine Fisheries Service - Alaska Fisheries Science Center in conjunction with the larger *ShoreZone* efforts funded by the Bureau of Ocean Energy Management, Alaska Outer Continental Shelf Region (BOEM Contract: M15PC00008).

ABSTRACT

A rare opportunity to assess and catalog benthic marine algae along the remote coastline of the Alaska Peninsula between 154.44° and 158.74° W occurred during May 2016. *Shorezone* coastal habitat mapping surveys conducted during two spring tide windows at 27 sites resulted in 130 observed species of benthic marine algae and 2 species of seagrasses. New western distribution records were noted for one brown alga, *Haploigloia andersonii*, three red algae, *Dilsea californica*, *Fuscifolium papenfussii*, and *Salishia firma*, and the seagrass *Phyllospadix serrulatus*; a new eastward distribution record was suggested for *Boreophyllum aleuticum* (its identification still requires verification). Specimens collected and pressed as vouchers totaled 298, and additional *in situ* photos showing species in their natural habitat amounted to 170. A systematic listing of the benthic marine algae and seagrasses is presented along with a complete inventory of voucher specimens and an image-rich digital catalog of the collection. An accounting of each species with important habitat and distribution notes provides the body of this report. The flora represents a mixture of predominantly eastern Pacific species, with strong similarities to the Kodiak archipelago but with a slightly diminished repertoire of species, and some western Pacific elements, but also with a few northwestern Gulf of Alaska endemics.

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INTRODUCTION

Baseline habitat assessment and collection of benthic marine algae from the Alaska Peninsula was undertaken in May 2016 in association with *ShoreZone* coastal habitat mapping activities in the region. Of the estimated 82,000 km of shoreline in Alaska (Cook et al. 2018), a remote section along the Alaska Peninsula remained un-surveyed by the Alaska *ShoreZone* program until 2016. Prior to this assessment, there have been no comprehensive surveys by scientific experts of this region, resulting in a great deal of interest to get on the ground and identify intertidal species assemblages, especially benthic marine algae.

Historically, two areas in the region (Kukak Bay and the Shumagin Islands—just to the east and west of the areas we assessed) were visited by the Harriman Alaska Expedition in 1899, and seaweed collections were made and published by De Alton Saunders (1901); the Shumagin Islands were also visited by the University of California Botanical Expedition to Alaska, 1899, and those records were published by Setchell & Gardner (1903). [Records of specimens collected during these expeditions can be found at the Alaska Seaweed Database (https://db.botany.ubc.ca/asd/specimen) and through the Macroalgal Herbarium Portal (http://macroalgae.org/portal/index.php).] Also, several sites in the region (Cape Nukshak, Spectacle Island) were visited during OCSEAP (Outer Continental Shelf Environmental Assessment Program) surveys in the 1970s, and a handful of specimens collected during those surveys can be found in the Alaska Seaweed Database and the Macroalgal Herbarium Portal under ALAJ (University of Alaska Southeast); some of these were noted in Lindstrom (1977). Regions to the east (Cook Inlet, Kenai Fjords, Prince William Sound, Yakutat Foreshore, and Southeast Alaska) and to the west (Cold Bay west to Attu Island, Aleutian Islands) have also been fairly intensively sampled for a variety of projects (Hind et al. 2014, Lindeberg and Lindstrom 2009, Lindstrom 2006, 2008a, 2008b, 2009, Lindstrom et al. 1999, 2011, 2015), andWynne (2009) chronicled algal collections in Alaska from the earliest Russian explorers to around 1900. Moreover, recent utilization of molecular sequencing in identifying benthic marine algae has revealed significant cryptic diversity in many genera so that new and comprehensive collections are needed in order to adequately characterize the biota of a region (Lindstrom 2008a. 2008b, Lindstrom et al. 2011, 2015, Saunders 2008). Thus, the region surveyed in May 2016 represented a significant gap in information on species diversity and distribution, voucher specimens, and genetic material needed to understand the species of benthic marine algae and their biogeography in Alaska.

Background: The Alaska *ShoreZone* program started imaging and mapping the State's coastline in 2001. *ShoreZone* is a standardized imaging and habitat mapping system of the coastal zone that produces an integrated dataset rich in imagery along with a searchable inventory of physical and biological features of the intertidal and nearshore zones (Harper and Morris 2014). *ShoreZone* is one of the few mapping systems that has a rigorous classification scheme for biological features known as biobands—species assemblages of coastal biota that are band-forming in cross-shore elevations associated with characteristic wave energies and substrate types. These biobands are often named after the dominant species that gives them their character (e.g. Rockweed Bioband, named after the brown alga *Fucus distichus*). *Fucus* may dominate a Rockweed bioband but the associated species within this bioband can vary at regional scales,

something *ShoreZone* cannot resolve from aerial mapping. To address this issue, the Alaska *ShoreZone* program supports a less well-known activity that conducts baseline information gathering on the ground known as Shore Station surveys.

The purpose of Shore Stations is to collect descriptive, site-specific observations of geographic, geomorphic, and biological characteristics that reflect the habitat type, exposure, and uniqueness of a site. A team of highly skilled coastal geomorphologists and taxonomists collects this information within the standardized *ShoreZone* parameters for habitat mapping. These qualitative observations complement *ShoreZone* and provide greater resolution of regional differences in species diversity, distribution, and habitat preferences in the Gulf of Alaska.

The primary objectives for the benthic marine algal component of the 2016 Shore Station surveys along the Alaska Peninsula were to: 1) collect vouchers and genetic material for taxonomic identification, 2) develop a species list for the region and provide a brief taxonomic assessment, and 3) produce an image rich digital catalog to fully document the collection. A digital catalog of benthic marine algae has not been a traditional product from these types of surveys but is a highlight of this effort. Cumbersome documentation of voucher specimens and photographs are often left out of reporting and remain unseen, but modern computing has made it possible to compile and view a virtual electronic collection.

Findings from this publication coupled with the full *ShoreZone* coastal mapping and Shore Station report (Cook et al. 2018) represent a wealth of key baseline information that will be utilized in the future by researchers and resource managers.

METHODS

The Alaska Peninsula Shore Station surveys were conducted in the intertidal zone during two low tide events in the spring of 2016: May 3rd - May 12th and May 20th - May 27th. Survey sites ranged from the western-most site in Mitrofania Bay to an eastern site on Mink Island, including offshore sites on Sutwik Island and the Semidi Island group (Figure 1). The geographic extent of the shore stations covered a coastline, including bays and islands, of approximately 2,300 km (Cook et. al. 2018).

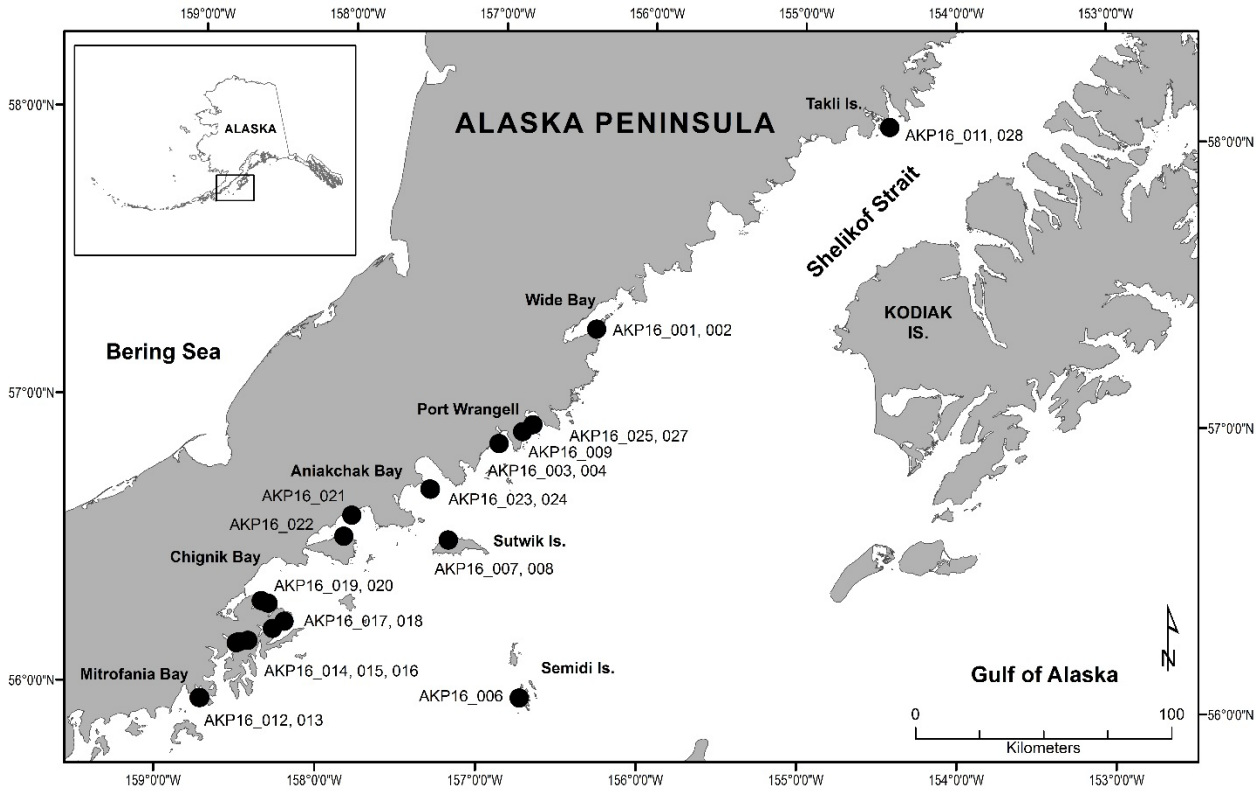

Figure 1. -- A map of the Alaska Peninsula coastline showing general locations where benthic marine algae specimens were collected. Labels list shore station(s) and correlate with collection information provided in Table 1.

Site selection: *ShoreZone* information for this area was not available prior to the Shore Station survey, thus sites were selected purposefully to represent a variety of coastal habitats, substrates, and exposure types that were geographically spread across the region. There was no intent to statistically extrapolate data from these surveys but simply to assess what was present as a baseline for these remote areas. Sites were chosen that could be accessed by small boat and in nearby pairs to be most efficient during low tide windows. Beaches classified as very exposed and exposed were not surveyed because they were not approachable by boat. A suite of 27 Shore Stations was surveyed for the benthic marine algae collection. Table 1 lists Shore Station location information for where collections were made and Table 2 lists their subsequent *ShoreZone* classification for substrate and exposure. Methods for this publication are constrained to the benthic marine algal collection. For a full description of *ShoreZone* Shore Station methods see (Cook et al. 2018).

Table 1. -- Site information on where benthic marine algae were collected on the Alaska Peninsula coast, May 2016. Shore Station number is the same as those referenced in Cook et al. (2018).

Collection Location	Shore Station	Date	Latitude Longitude
Islet north of Slaughter Is., Wide Bay	AKP16_001	4-May-2016	N57.34386 W156.30667

Collection Location	Shore Station	Date	Latitude Longitude
Slaughter Island, Wide Bay	AKP16_002	6-May-2016	N57.33322 W156.33558
Nakalilok Bay	AKP16_003	7-May-2016	N56.92094 W156.93511
Nakalilok Bay	AKP16_004	7-May-2016	N56.92119 W156.93664
Choweit Island, Semidi Islands	AKP16_006	8-May-2016	N56.03626 W156.73961
Sutwik Island	AKP16_007	8-May-2016	N56.57624 W157.23144
Sutwik Island	AKP16_008	9-May-2016	N56.57650 W157.23237
Port Wrangell	AKP16_009	10-May-2016	N57.04739 W156.60646
Takli Island North, Russian Anchorage	AKP16_011	12-May-2016	N58.07936 W154.46570
Mitrofania Bay	AKP16_012	20-May-2016	N55.97478 W158.74128
Mitrofania Bay	AKP16_013	20-May-2016	N55.97508 W158.73828
Portage Bay, Kuiutka Bay	AKP16_014	21-May-2016	N56.17456 W158.53375
Portage Bay, Kuiutka Bay	AKP16_015	21-May-2016	N56.17856 W158.51953
Portage Bay, Kuiukta Bay	AKP16_016	21-May-2016	N56.18575 W158.46142
Castle Bay	AKP16_017	22-May-2016	N56.26083 W158.24167
Castle Bay	AKP16_018	22-May-2016	N56.23346 W158.31236
Anchorage Bay, Chignik Bay	AKP16_019	23-May-2016	N56.32022 W158.35014
Eagle Rk, Anchorage Bay, Chignik Bay	AKP16_020	23-May-2016	N56.32758 W158.39378
Kujulik Bay	AKP16_021	24-May-2016	N56.64483 W157.85397
Kujulik Bay	AKP16_022	24-May-2016	N56.56994 W157.89736
Garden Island, Aniakchak Bay	AKP16_023	25-May-2016	N56.75131 W157.36417
Garden Island, Aniakchak Bay	AKP16_024	25-May-2016	N56.75000 W157.36094
Chiginagak Bay	AKP16_025	26-May-2016	N56.96631 W156.78814
Dickerson Is., Chiginigak Bay	AKP16_027	26-May-2016	N56.99164 W156.72442
Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	27-May-2016	N58.05822 W154.43911

Table 2. -- Shore Station habitat information based on Alaska *ShoreZone* classification system for sites where benthic marine algae were collected.

Station	Substrate	Exposure
AKP16_001	Partially mobile (vertical cliff and wide bedrock platform with gravel beach)	Semi-exposed
AKP16_002	Immobile (vertical bedrock cliff with wide bedrock platform)	Semi-exposed
AKP16_003	Immobile (vertical bedrock cliff with a wide, flat bedrock platform)	Semi-exposed
AKP16_004	Partially mobile (wide, low gradient boulder beach over bedrock platform)	Semi-exposed
AKP16_006	Partially mobile (wide, low gradient boulder beach)	Semi-exposed
AKP16_007	Partially mobile (wide, mixed substrate beach with a bedrock outcrop)	Semi-exposed
AKP16_008	Partially mobile (wide, low gradient boulder & cobble beach)	Semi-exposed
AKP16_009	Immobile (steep bedrock cliff with narrow, low gradient bedrock ramp)	Semi-exposed
AKP16_011	Partially mobile (bedrock ramp with a veneer of boulder and cobble)	Semi-exposed

Station	Substrate	Exposure
AKP16_012	Partially mobile (bedrock cliff with narrow boulder, cobble, & pebble beach)	Semi-protected
AKP16_013	Partially mobile (bedrock cliff with narrow, low gradient boulder & cobble beach)	Semi-exposed
AKP16_014	Partially mobile (steep bedrock cliff with boulder beach)	Semi-protected
AKP16_015	Partially mobile (vertical bedrock wall with low gradient bedrock, boulder, & cobble beach)	Semi-protected
AKP16_016	Mobile (wide, low gradient cobble and pebble beach)	Protected
AKP16_017	Immobile (large, angular boulders overlying a bedrock platform.)	Semi-exposed
AKP16_018	Partially mobile (low gradient boulder, cobble, and pebble beach)	Semi-exposed
AKP16_019	Partially mobile (vertical bedrock cliff with wide, low gradient bedrock platform covered in cobble and boulder)	Semi-exposed
AKP16_020	Immobile (vertical bedrock wall with low gradient bedrock platform)	Semi-exposed
AKP16_021	Partially mobile (vertical bedrock cliff with bedrock platform with boulder and cobble)	Semi-exposed
AKP16_022	Partially mobile (low bedrock cliff with wide, low gradient bedrock, boulder, and cobble beach)	Semi-protected
AKP16_023	Partially mobile (wide, low gradient boulder, cobble, and pebble beach)	Semi-exposed
AKP16_024	Partially mobile (vertical bedrock cliff with low gradient, wide bedrock, boulder, cobble, and sand beach)	Semi-exposed
AKP16_025	Partially mobile (wide, low gradient boulder, cobble, pebble, and sand beach)	Semi-exposed
AKP16_027	Partially mobile (steep large boulder beach)	Semi-protected
AKP16_028	Partially mobile (long, low gradient boulder, cobble, and pebble spit)	Semi-protected

Vouchers and in situ photos: Voucher specimens and *in situ* photos were collected from Shore Stations to generate a listing of benthic marine algae for the Alaska Peninsula region. Species lists for each Shore Station are summarized in Cook et al. (2018). Collected specimens were preserved using a wet mount technique to display their morphology on herbarium paper and then dried in a plant press (Figure 2). Relevant pressed vouchers have been deposited in the University of British Columbia Herbarium and replicate specimens will be donated to the Smithsonian's U.S. National Herbarium. Genetic material was preserved by desiccating small portions of specimens in silica gel. Weatherproof digital cameras were used on the beaches to capture benthic marine algae in their natural habitat and for species that cannot be easily removed or preserved (e.g. coralline and crustose algae).

Figure 2. -- Preserving voucher specimens using a wet mount technique to display benthic marine algae: A) float specimen in tub of seawater, B) mount specimen by slipping herbarium paper under specimen in the tub and lift out for placement in a plant press with botters, and C) close plant press for drying.

Taxonomic identification:
Specimens were identified using gross morphological characters and, if necessary, microscopic examination using a compound microscope. Identifications followed the seaweed keys of Gabrielson et al. (2012) and primary literature as needed. Extensive experience by the authors in seaweed identification in areas both to the northeast and southwest of the Alaska Peninsula region meant most determinations were easily made. For more difficult specimens, DNA from vouchers in silica gel was extracted in the laboratory, amplified using appropriate primers and sequenced following protocols reported in Lindstrom & Hanic (2005), Lindstrom (2008a, 2008b), and Lindstrom et al. (2011, 2015).

Digital catalog: Producing a digital catalog of benthic marine algae required several additional post processing steps for vouchers, but the resulting product is accessible, image rich and informative. Pressed specimens were digitized using a flatbed scanner at a resolution no less than 300 dpi. Resulting image files were edited or cropped if needed to ensure good quality digital vouchers and given a standardized file name. A photo management and editing software was then used to embed metadata into IPTC fields (International Press Telecommunications Council standards) of all image files (digital images of pressings and *in situ* photos). Metadata included information on: scientific name as part of the image filename, unique identification number, geolocation (latitude and longitude), place name, date collected, Shore Station number, type of habitat, and the location where the voucher specimen has been archived (registered herbarium). All image files were organized by phylogenic group (Chlorophyta, Ochrophyta, Rhodophyta, and Anthophyta) and then listed alphabetically by scientific name. Within a species listing, images of pressings are shown first followed by *in situ* photos. The final catalog compilation was then converted into an electronic Adobe Acrobat PDF file with metadata visible for viewing or printing (Figure 3).

Figure 3. -- Sample pages from the digital catalog. Digital image of pressing and *in situ* photo of *Scytosiphon lomentaria*. Semi-colons indicate metadata not applicable or not available.

RESULTS

The 2016 Alaska Peninsula Shore Station surveys presented an opportunity to assess and catalog benthic marine algae from the intertidal zone in a region lacking this type of baseline information. During two spring tide windows in May 2016, a total of 130 species of benthic marine algae were observed plus 2 species of seagrasses, *Phyllospadix serrulatus* and *Zostera marina.* Five species of benthic marine algae and one species of seagrass observed from this region are new distribution records. Specimens collected and pressed as vouchers totaled 298 and additional *in situ* photos amounted to 170 (Table 3). A complete systematic listing of the benthic marine algal species observed during the May 2016 surveys on the Alaska Peninsula is shown in Appendix A following the taxonomy of Gabrielson & Lindstrom (2018). The vouchers and *in situ* photos with their associated collection information have been compiled into a complete listing in Appendix B and an image rich, digital catalog in Appendix C.

Table 3. -- Summary of seaweeds and seagrasses observed, specimens collected, and species photographed *in situ* on the Alaska Peninsula in May 2016.

Group	Species Observed	Collected Specimens	In Situ Photos
Chlorophyta (Green Seaweeds)	20	30	27
Ochrophyta (Brown Seaweeds)	36	79	40
Rhodophyta (Red Seaweeds)	74	185	93
Anthophyta (Seagrasses)	2	4	10
Total	**132**	**298**	**170**
New Distributions	6		

The following section briefly assesses findings from the collection by systematic grouping, e.g. Phylum and then by Family. References to sites are abbreviated from Table 1 (e.g. AKP16_001: site 1). References after a species name indicate the voucher or *in situ* photo can be found in Appendix C of this report (e.g. C-1: Appendix C-page 1).

Phylum Chlorophyta (Green Algae)

A total of 20 species in 13 genera were observed from the Alaska Peninsula sites, with most being collected. All 20 species are known to occur both to the northeast and southwest, thus none represented a new distribution record. Still, few of the sites we visited had been previously sampled by a phycologist so most samples represented new records for individual sites.

Family Cladophoraceae. Three species in this family were observed: *Chaetomorpha melagonium*, *Chaetomorpha* sp. (the taxonomy of local species requires clarification) and *Cladophora sericea*. *Chaetomorpha melagonium* is a distinctive low intertidal to subtidal species forming stiff upright filaments whereas *Chaetomorpha* sp. (C-27) usually occurs in skeins of narrow, unbranched filaments that wrap themselves around other algae in the intertidal zone; it can be bright green. In contrast, *Cladophora sericea* (C-28) is often a paler green and made up of branched filaments. Both latter species prefer relatively quiet environments where they can form extensive mats. Significant cover of *Cladophora* was noted only at site 15, a semi-protected site. *Chaetomorpha melagonium* was observed only at one of the Sutwik Island sites.

Family Prasiolaceae. Two species in this family were observed: *Prasiola borealis* and *Rosenvingiella polyrhiza*; both occur on high intertidal to supratidal bedrock or boulders (Splash Zone bioband). *Prasiola borealis* is a small foliose blade, infected with a fungus (often turning the blade nearly black); it was observed in Castle Bay. *Rosenvingiella polyrhiza* (C-39 to C-42) is filamentous in appearance although it is actually a narrow parenchymatous cylinder; it was found at sites in Wide Bay, Nakalilok Bay, Port Wrangell, north of Takli Island, and in Chignik Bay.

Family Gomontiaceae. *Monostroma grevillei* (C-32 to C-34) is a spring-early summer ephemeral represented by the gametophyte phase, which is a thin, bright green blade. It was observed at most sites.

Family Ulotrichaceae. This family is well represented in the area with at least seven species in four genera (all are represented by their gametophyte phase). All occur in spring although most extend to some extent into early summer at these northerly latitudes. Four species of *Acrosiphonia* were identified: *A. arcta* (C-5 to C-10), *A. coalita* (C-11 to C-14), *A. duriuscula* (C-15 to C-17), and *A. sonderi* (C-18 to C-22)—identities of most specimens were confirmed by sequencing however one was unknown (C-4). *Acrosiphonia arcta* can occur slightly higher in the intertidal zone then the other species (from the Rockweed bioband down the shore into the low zone), and the large-celled *A. sonderi* usually occurs on rock near sand. *Pseudothrix borealis* (C-35 to C-38) was identified at three sites. *Ulothrix flacca* (C-43) often occurs mixed with *Urospora neglecta* (C-44, C-47 and C-48, C-57 to C-60); these tasty filaments are a spring-time treat for hungry littorines (C-45, C-46). These last two species are common in boulder/cobble fields (disturbed habitats) in spring.

Family Kornmanniaceae. The tubular *Blidingia minima* (C-23 to C-26) is another common species on boulders and cobble, where it can be found in some abundance. In contrast, the foliose *Kornmannia leptoderma* (C-29 and C-30) usually occurs as an epiphyte on seagrass, either *Phyllospadix serrulatus* or *Zostera marina*. The *Kornmannia* was particularly striking on the *Phyllospadix* in Chiginagak Bay (Figure 4).

Family Ulvaceae. This family is presented by blades that are one cell (*Ulvaria obscura* var. *blyttii*, C-56) or two cells thick (*Ulva lactuca*, *Ulva linza*, C-54 and C-55). The species of *Ulva* are usually intertidal whereas *Ulvaria* occurs in the low intertidal into the subtidal. *Ulva lactuca* (C-49 to C-53) was one of the most common seaweeds observed. We observed *U. intestinalis* and *U. prolifera*, two of the tubular species of *Ulva*, at only one and two sites, respectively, but no voucher specimens were collected nor photos taken.

Figure 4. -- A notable Chlorophyte (green alga) observed from the Family Kornmanniaceae on the Alaska Peninsula, *Kornmannia leptoderma*. Left panel shows a pressed specimen (C-18) and on the right an *in situ* photo from Chiginagak Bay. Both panels show *Kornmannia* epiphytic on surfgrass.

Phylum Ochrophyta, Class Phaeophyceae (Brown Algae)

A total of 36 species in 28 genera were observed from the Alaska Peninsula sites, and most were collected. Most species are known to occur both to the northeast and southwest; only *Haplogloia andersonii*, collected at Chignik, represents a new western distribution record. Still, few of the sites we visited had been previously sampled by a phycologist so most samples represent new records for individual sites.

Family Sphacelariaceae. A single species, *Sphacelaria rigidula* (C-176), formed a carpet on some of the rocky substrate of the Alaria bioband at Kujulik Bay. Because of its small stature and understory habitat, it is possible this species was overlooked at other sites.

Family Desmarestiaceae. The two common terete species of *Desmarestia*, *D. aculeata* and *D. viridis*, were observed at several sites; none of the ligulate species were seen. All of these species are more common subtidally so it was not surprising to find *D. aculeata* and *D. viridis* in low intertidal pools at Garden Island as well as in the subtidal urchin barrens just below tide level. *Desmarestia aculeata* (C-103 to C-105) was also observed in the low intertidal at Castle and Kujulik Bays. Since it is not as acidic as other species of the genus, *D. aculeata* can withstand exposure to air better than *D. viridis*, which often bleaches and disintegrates after exposure.

Family Acinetosporaceae. A single species, *Pylaiella littoralis*, was observed at most sites. It commonly occurred in the Rockweed bioband, the species with which it is often associated, and usually as an epiphyte. The species can also form large skeins in intertidal run-off streams, as was observed at the head of Kuiukta Bay and Chiginagak Bay (C-146).

Family Chordariaceae. Ten species in this family were recorded at various sites. *Coilodesme bulligera* (C-82 to C-87) occurred on *Ralfsia fungiformis* at Kuiukta Bay (C-83) and Garden Island and on rock at other sites in lower biobands, and *C. californica* was epiphytic on *Stephanocystis geminata* (C-88 to C-90). *Dictyosiphon foeniculaceus* occurred at protected sites at the head of Kuiukta Bay and at Mink Island. *Elachista fucicola* occurred intermittently as epiphytic tufts on *Fucus* (C-106); it was mostly rare, but occurred at a slightly higher abundance at Chignik Bay. *Haplogloia andersonii* was observed in a mid-intertidal tidepool at site 19 (Chignik Bay); this represents a western distribution record for this species. *Myrionema balticum* was identified as a microscopic epiphyte on *Devaleraea mollis* (formerly *Palmaria mollis*: C-132 and C-133) in the Alaria bioband in Kujulik Bay (site 21), and *Punctaria* sp. (C-143) occurred in the Rockweed bioband also in Kujulik Bay (site 22). *Soranthera ulvoidea* (C-171 to C-175) was found throughout the area as an epiphyte on *Odonthalia floccosa.* Like kelps, the Chordariaceae have an alternation of heteromorphic generations with a microscopic gametophytic phase. Reproduction is thought to be seasonal. Thus, we only observed *Leathesia marina* (C-129) at sites from mid-May onward and *Chordaria flagelliformis* only at the last site visited. We did not observe *Chordaria gracilis*, *Eudesme virescens* or *Saundersella simplex* at any sites as these species and *C. flagelliformis* generally do not appear on the shore until later in the summer.

Family Ectocarpaceae. Although several specimens were identified in the field as *Ectocarpus*, no vouchers were made, so we are unable to verify the presence of this family along the Alaska Peninsula in May. *Ectocarpus*, if present, is expected to occur later in the season.

Family Scytosiphonaceae. At least five species in this family were identified at various sites. *Colpomenia bullosa* (C-91 and C-92) occurred in the lower mid intertidal (Red Algae bioband between barnacles and Alaria) and low intertidal (Surfgrass bioband) at Garden Island and Chiginagak Bay, respectively. *Colpomenia peregrina* (C-93) occurred in the low zone (on *Stephanocystis* in Castle Bay and in the Surfgrass bioband in Chiginagak Bay. *Melanosiphon intestinalis* (C-130 and C-131) was essentially ubiquitous, occurring in the mid intertidal (Rockweed bioband) at most sites but usually in low abundance ("rare"). *Scytosiphon lomentaria* (C-162 to C-170) was also nearly ubiquitous, occurring in the mid to low intertidal zone depending on availability of substrate, and *Petalonia fascia* (C-137 to C-142) occurred at somewhat fewer sites but also throughout the mid to low intertidal. Both *Petalonia* and *Scytosiphon* can alternate with the Ralfsia-like phase, which was also noted at about one-third of the sites.

Family Fucaceae. *Fucus distichus* (C-108), the common band-forming species of the mid intertidal, is the only representative of this family in the area. It occurred on bedrock, boulders, and even cobble at low to moderately exposed sites (C-109).

Family Sargassaceae. A single species, *Stephanocystis geminata* (formerly called *Cystoseira geminata* C-177 to C-180), occurred in the low zone at many of the sites between Castle Bay and Chiginagak Bay as well as at Mink Island in Katmai National Park. This species favors moderately exposed sites. It had its typical epiphyte *Coilodesme californica*.

Family Agaraceae. The Agaraceae is one of three families of kelp (large brown seaweeds belonging to the Order Laminariales) found on the Alaska Peninsula. Only the sieve kelp, *Agarum clathratum*, and the five-ribbed kelp, *Costaria costata*, occurred at sampled sites. The perennial *Agarum clathratum* (C-62) is more common subtidally so was only observed at sites sampled during the lowest tides of the series whereas the annual *Costaria costata* (C-94 to C-97) is a low intertidal species but still quite spotty in occurrence ("few" to "rare" at most sites, C-96 and C-97).

Family Alariaceae. *Alaria marginata* (C-63 to C-69) is the catch-all species name for morphologically and genetically diverse ribbon kelps (Lane et al. 2006). It often forms a band in the lower mid intertidal to upper low intertidal on rocky shores with some wave action or current (C-70 to C-74). Since it is an annual, it is considered an early successional species in disturbed habitats. *Eualaria fistulosa* (C-107), the dragon kelp, forms offshore floating kelp beds; it was noted only in the Semidi Islands and in Aniakchak Bay.

Family Laminariaceae. The remaining kelps are members of this family. Species in this family usually occur in the lowest intertidal zone and dominate the Dark Brown Kelp band or the Soft Brown Kelp band. *Cymathaere triplicata* (C-98), the three-ribbed kelp with suction cup holdfast, is an annual that favors low intertidal cobble habitats although it can occur on bedrock and boulders (C-99 to C-102). *Laminaria longipes* (C-111 to C-114) and *L. setchellii* (C-115 and C-116) occurred in the Dark Brown Kelp band at some of the more exposed sites. The suction-cup kelp, *Laminaria yezoensis* (C-126 to C-128), occurs mainly subtidally but may extend into the lowest intertidal band at some sites. *Laminaria* sp. nov. (C-117 to C-125) represents a common but undescribed kelp that strongly resembles *Saccharina nigripes* (formerly identified as *S. groenlandica* inter alia, C-125); it lacks bullations, is usually narrower than *S. nigripes*, and prefers slightly more exposed habitats (we documented it at most of the sites visited in late May) (Figure 5). This species and *S. nigripes* dominate the Dark Brown Kelp bioband whereas *S. latissima* (C-153 to C-156) usually dominates the Soft Brown Kelp bioband. *Saccharina druehlii* (or *S. sessilis*—these species have yet to be clearly differentiated morphologically as well as biogeographically; both are essentially stipeless; C-157 and C-158) occurs at the elevation of the Alaria bioband. At the Alaska Peninsula sites, it co-occurred with *Alaria*; in other, more stable areas, it can replace the Alaria bioband. The bullkelp, *Nereocystis luetkeana* (C-134 to C-136), formed offshore beds at many sites.

Family Ralfsiaceae. The bottlebrush seaweed, *Analipus japonicus* (C-75 to C-80), occurred at more than half of the sites but in low abundance (mostly "rare"); it occurred primarily in the Rockweed bioband (C-81) but occasionally at lower elevations. The sea fungus, *Ralfsia fungiformis* (C-146 to C-149), was observed at fewer than a third of the sites and was also usually "rare"; it was found in the low biobands at those sites.

Figure 5. -- A common but undescribed species of kelp, *Laminaria* sp. nov. from the Alaska Peninsula. The left panel shows a pressing of a young specimen (C-122), and the panel on the right shows a bed of adults *in situ* from the digital catalog (C-125).

Phylum Rhodophyta (Red Algae)

The red algae are the most speciose group of seaweeds in northern waters, and that is also true for the Alaska Peninsula. A total of 74 species in 46 genera were observed at the Alaska Peninsula sites. Despite their diversity, however, they are mostly small to middling in stature and form relatively few of the biobands we identified on the Alaska Peninsula. Members of the Bangiales can form an ephemeral spring Winter Laver bioband (named the Porphyra bioband in earlier projects from when all of the foliose members of the Bangiales were still in the genus Porphyra; no actual species of *Porphyra* have been recorded from the Alaska Peninsula). A variety of red (and often green) algae constitute the Red Algae bioband, which can include *Palmaria hecatensis*, *Halosaccion glandiforme*, *Neorhodomela aculeata*, *Odonthalia floccosa*, *Mastocarpus*, *Mazzaella* and *Polyostea bipinnata* (and the green algae *Acrosiphonia* and *Ulva* spp.). This bioband usually occurs in the lower mid intertidal, favoring semi-protected sites but also at semi-exposed sites, especially if the substrate is unstable (small boulders and cobble). Other species contributed to other biobands as noted below.

Family Bangiaceae. This is an extremely diverse family likely due to its ancient lineage. The Alaska Peninsula has a rich flora of species in this family, especially showing in late spring, when we sampled. Species of "*Bangia*" formed large patches at a number of sites, notably sites 2 (Slaughter Island, Wide Bay), 4 (Nakalilok Bay), 15 (Kuiukta Bay) and 27 (Dickerson Island, Chiginagak Bay). "*Bangia* 2" sp. 1 (C-187 to C-196) was abundant in Kuiukta Bay and Chiginagak Bay. "*Bangia* 3" sp. 1 (C-197) was seen in Castle Bay. "*Bangia* 3" sp. 3 (C-198) and

a variant (C-199 to C-201) of this northern species occurred at a number of sites; "*Bangia* 3" sp. 3 has even been recorded from the Canadian Arctic as well as the northwest Atlantic. ["*Bangia* 2" and "*Bangia* 3" are the names given to two undescribed genera with the morphology of *Bangia* by Sutherland et al. (2011). Between the two genera, there are at least a dozen species, only two of which have been described; neither of these occurs in Alaska.] Additional habitat photos of "*Bangia*" can be seen in C-202 and C-203; since these weren't sampled and sequenced, the identities of these filaments cannot be determined.

A total of 14 species of foliose Bangiales was recorded at various Alaska Peninsula sites. Two of these were tentative, pending molecular or morphological confirmation: *Boreophyllum* cf *aleuticum* (C-204) and *Wildemania norrisii*. If present, *B. aleuticum* would represent a new eastern range limit for the species, previously known only from the Aleutian Islands (Lindstrom et al. 2015). *Wildemania norrisii* is expected to be present but later in the season. The Castle Bay collection of *Fuscifolium papenfussii* (C-258) represents a new western record for this species. The remaining species occur well within their known geographic ranges (Lindstrom 2008a, Lindstrom et al. 2015): *Pyropia abbottiae* (C-394 to C-398,), *Pyropia fallax* (C-399 to C-401), *Pyropia fucicola* (C-402 to C-404), *Pyropia kurogii* (C-405 to C-408), *Pyropia nereocystis* (drift—C-409), *Pyropia pseudolanceolata* (C-410 to C-407), *Pyropia taeniata* (C-417 and C-418), *Pyropia torta* (C-419 to C-422), *Pyropia unabbottiae* (C-423 to C-425), *Wildemania cuneiformis* (C-452 to C-456), and *W. variegata* (C-457 and C-459). Of these, *Pyropia pseudolanceolata* and *P. torta* were major contributors to the Winter Laver bioband, and other species like *P. abbottiae*, *P. fucicola*, and *P. unabbottiae* formed up to 80% cover in the Rockweed and other mid intertidal biobands (C-387 to C-393). *Pyropia* was especially abundant on boulder beaches (C-387).

Family Hildenbrandiaceae. A single species of *Hildenbrandia* was recognized in field sampling. This was tentatively identified as *H. rubra* (C-281). We know from other work (Lindstrom et al. unpublished) that there is a great deal of cryptic diversity in this genus.

Family Ahnfeltiaceae. A single species of *Ahnfeltia*, *A. fastigiata* (C-182 and C-183), was recognized on the Alaska Peninsula. It was noted at only four sites and occurred from the upper intertidal Bare bioband to the low intertidal Red Algae bioband. At upper elevations, it is usually associated with tidepools or seepage areas.

Family Corallinaceae. We include all coralline algae in this family for now since the higher rank taxonomy of corallines is in a state of flux and is unresolved (Gabrielson & Lindstrom 2018). Thus, we include both upright, articulated species (*Bossiella frondescens*—C-205 and C-206, *Corallina officinalis* (C-215 and C-216), and *C. vancouveriensis*—seen only at the more exposed sites sampled in early May) and crustose species. Some crustose species encrust rock (*Clathromorphum*—smooth crust in C-210 to C-212; *Lithothamnion*—rugose crust in C-210 to C-212) whereas others such as *Neopolyporolithon reclinatum* (C-323) occur epiphytically on species such as *Ahnfeltia fastigiata*.

Family Rhodochortonaceae. The red sea moss, *Rhodochorton purpureum* (C-426), actually consists of a number of cryptic species. Although it is likely only a single species that occurs on

the Alaska Peninsula, its true identity and affinities with other populations is unknown. It was noted at only the two sites in Castle Bay, where it occurred in dark areas in the mid intertidal Rockweed bioband.

Family Palmariaceae. This family is especially rich in the northern Gulf of Alaska. It includes *Devaleraea callophylloides* (C-220 to C-230), *D. mollis* (C-231 to C-244), *Halosaccion firmum* (C-267 to C-272), *H. glandiforme* (C-273 to C-277, *Halosaccion* sp nov. (epiphytic—C-278 to C-280), *Palmaria hecatensis* (C-352 to C-360), and *Palmaria* sp. nov. (C-361). We have been unable to determine the identity of a high intertidal soft *Halosaccion* growing in clumps (C-266).

Family Ceramiaceae. We identified five species in this family: *Antithamnionella pacifica* (C-184 to C-186), *Callithamnion pikeanum*, *Ceramium pacificum* (C-208 and C-209), *Microcladia borealis* (C-314), and *Scagelia occidentale* (C-428 and C-429).

Family Delesseriaceae. Four species of Delesseriaceae were also observed: *Membranoptera spinulosa* (C-313), *Mikamiella ruprechtiana* (C-315 to C-322), *Phycodrys fimbriata* (C-362 to C-364), *Tokidadendron bullatum* (C-444 to C-450).

Family Rhodomelaceae. A number of species in this family formed significant cover at various elevations in the intertidal and even dominated a Red algae bioband at some sites: *Neorhodomela aculeata* (C-324 to C-326; it dominated the Red algae bioband at sites 10 and 24), *N. oregona* (C-327 to C-329; it formed significant patches in the Winter Laver, Bare and Barnacle biobands, especially where shallow water was present), *Odonthalia floccosa* (C-330 to C-339; it dominated the Red algae bioband at sites 2, 18, 20 and 24), *O. floccosa* f. *comosa* (C-340 to C-344; it co-occurred with *Fucus* in the Rockweed bioband at site 20), and *Polyostea bipinnata* (C-365 to C-375; it dominated the Red algae bioband at sites 14 and 15). An undetermined *Polysiphonia* with 4 pericentral cells (C-376) was collected in Kuiukta Bay; two other *Polysiphonia* with 4 percientral cells, *P. senticulosa* (C-377) and *P. pacifica*, were observed at a number of sites but no vouchers were made or photographs taken of *P. pacifica*. The low intertidal to subtidal *O. kamtschatica* (C-345 to C-348) and *O. setacea* (C-349 to C-351) were only spotty in occurrence.

Family Wrangeliaceae. Two species of *Ptilota*, *P. asplenioides* (C-378 and C-379) and *P. serrata* (C-380 to C-386), were found at a number of sites.

Family Dumontiaceae. This family is generally well-represented in the cold North Pacific and includes a diversity of forms occurring in a variety of habitats. *Dumontia alaskana* and *D. simplex* are both spring ephemerals that are generally rare even when "in season". *Dumontia alaskana* (C-249 to C-252) was observed at ten sites, often in tidepools and at various elevations, but *D. simplex* (C-253 and C-254) was only found at site 1 in Wide Bay in the mid intertidal and site 25 in Chiginagak Bay in the low intertidal. *Cryptosiphonia woodii* (C-217 to C-219) is also ephemeral but with a somewhat longer season than the *Dumontia* spp.; it usually occurs in the lower mid intertidal (e.g., Red Algal bioband, lower Rockweed bioband). *Dilsea californica* (C-245 to C-248) is an annual; it was observed in the low intertidal on Choweit Island and in Chignik Bay and represents a new western distribution record for the species. In contrast to the

other species, the cracked saucer *Constantinea subulifera* (C-213 and C-214) is found only in the low intertidal to subtidal zones; it is a long-lived perennial species that produces new terminal peltate blades at the ends of branches annually. Although we have observed it both to the northeast and southwest of the sites visited, we did not see any *Neodilsea borealis* at our Alaska Peninsula sites, perhaps because we did not visit the type of environment it favors.

Family Endocladiaceae. This family is comprised of two common mid intertidal red algae, the perennial *Endocladia muricata* (C-255 and C-256) and the spring/early summer ephemeral *Gloiopeltis furcata* (although its basal crust persists perennially). Along the Alaska Peninsula, we found *Gloiopeltis* (C-259 to C-265) occurring from the high intertidal (Winter Laver bioband at Castle Bay site 17) to the low intertidal (Red algae bioband at Kuiukta Bay site 14), although it was more abundant in the mid intertidal (low Barnacle to high rockweed biobands); we even identified an upper mid intertidal Red Algae bioband on the dominance of *Gloiopeltis* at this elevation at site 18 in Castle Bay. *Endocladia muricata* also occurred primarily in the mid intertidal low Barnacle to high Rockweed biobands.

Family Furcellariaceae. Only a few individuals of the red sea cabbage, *Turnerella mertensiana* (C-451), were observed in the Dark Brown Kelp bioband at sites 3 and 6. It was probably more common subtidally.

Family Gigartinaceae. Three species of *Mazzaella* were observed along the Alaska Peninsula: *Mazzaella parksii* was recorded at a single location (Choweit Island), where it formed the upper limit of algal vegetation on bedrock (C-295 to C-299); *M. parvula* and *M. phyllocarpa* are more widespread. *Mazzaella parvula* (C-300 to C-305) usually occurs in the mid intertidal, and *M. phyllocarpa* (C-306 to C-312) is more common in the low intertidal (often tidepools) to subtidal. All three species are closely related and can be difficult to distinguish from each other morphologically.

Family Kallymeniaceae. Species in this family are more common in the subtidal than the intertidal, but we observed at least four species intertidally: *Callophyllis* cf. *edentata* sensu Clarkston and Saunders (2013—C-207), *Euthora cristata* (C-257), *Kallymeniopsis* sp. (C-282; *Kallymeniopsis oblongifructa* was recently moved to the genus *Erythrophyllum* but the type of the genus, *K. lacera*, remains in *Kallymeniopsis*), and *Salishia firma* (C-427), which occurred in the lower mid intertidal (Rockweed and Red Algae biobands) in Castle Bay and represents a new western distribution record. The *Callophyllis edentata*-like species may also represent a new western distribution limit.

Family Phyllophoraceae. Three species of *Mastocarpus* were observed at sites: the mid to high intertidal *M. alaskensis* and the low intertidal *M. latissimus* and *M. pacificus* (sometimes also observed in mid to high intertidal pools). These taxa represent the gametophytic phase of the species; the sporophytic Petrocelis phase was also observed at about half the sites, mostly in the mid zone. *Mastocarpus alaskensis* (C-283 to C-286) was a significant component of a number of mid to high biobands (Winter Laver, Barnacle, Green Algae, Rockweed) whereas *M. latissimus* (C-287 to C-293) comprised up to 60% cover in mid to low biobands (Rockweed, Red Algae,

Alaria). The highly variable morphology of this latter species was confirmed by DNA sequencing of voucher specimens. *Mastocarpus pacificus* (C-294) was much less abundant than either of the other two species but was noted in at least one Soft Brown Kelp bioband at site 15 in Kuiukta Bay.

Family Rhodymeniaceae. *Sparlingia pertusa* (C-436 to C-443) is a distinctive low intertidal and subtidal species around the North Pacific rim; it was observed only at sites visited during the lowest of tides.

Family Schizymeniaceae. *Schizymenia pacifica* (C-430 to C-435) was the name tentatively given to a lower mid intertidal tidepool specimen from Castle Bay; it was also observed in the low intertidal urchin barrens at Garden Island. Without sequencing, it is not possible to tell whether this could be one of several cryptic species of *Schizymenia* occurring in the North Pacific (Gabrielson & Lindstrom 2018).

Figure 6. *Dilsea californica* (left: C-245; right: C-246) from the Family Dumontiaceae collected from Choweit Island and in Chignik Bay (sites AKP16- 6 and 19) representing a new western distribution record for the species.

Phylum Anthophyta (Seagrasses)

Family Zosteraceae. *Phyllospadix serrulatus* (C-462 to C-471) was the only surfgrass seen along the Alaska Peninsula. We extended its known range from Alinchak Bay on the Alaska Peninsula (57° 48.033’ N 155° 17.267’ W) and Sitkinak Island (off the south coast of Kodiak at 56°

33.752' N 153° 52.939' W) to Chignik Bay (56° 19.224' N 158° 20.934' W). There were also extensive beds at site 7 on Sutwik Island (56.57624° N and 157.23144° W) and at site 25 in Chiginagak Bay (56.96631° N 156.78814° W) which was classified as a Surfgrass bioband. The eelgrass *Zostera marina* (C-472 to C-475) was observed at only a handful of sites since it prefers soft substrates, which we seldom sampled. Site 16 on the southeastern corner of Portage Bay within Kuiukta Bay did have an Eelgrass bioband in the lower intertidal.

Figure 7. A prominent surfgrass, *Phyllospadix serrulatus*, found on more exposed sites. The left panel shows a pressing (C-462) and the right panel an extensive bed *in situ* from the digital catalog (C-469).

DISCUSSION

The Alaska Peninsula Shore Station surveys of 2016 provided a snapshot of seaweed diversity along a little-studied stretch of coastline. The flora we observed represented a mixture of predominantly northeastern Pacific species, with strong similarities to the Kodiak archipelago but with a slightly diminished repertoire of species, and some western Pacific elements, but also with a few northwestern Gulf of Alaska endemics. Like other parts of the Alaska coastline, this region continues the pattern of decreasing diversity as one moves east to west (Lindstrom 2006). Of the 28 or so species reported to reach their western limit in the Kodiak archipelago[1], only

[1] *Urospora penicilliformis*, *Hecatonema lawsonii*, *Lessoniopsis littoralis*, *Macrocystis pyrifera*, *Myrionema foecundum* f. *simplicissimum*, *Bossiella dichotoma*, *Callophyllis crenulata*, *C. edentata*, *Dilsea californica*, *Erythrotrichia carnea*, *Fredericqia decewii*, *Fuscifolium papenfussii*, *Leachiella pacifica*, *Lithophyllum impressum*, *Loranthophycus* sp. nov., *Mastocarpus intermedius*, *Mazzaella dewreedei*, *Mazzaella oregona*, *Membranoptera*

Callophyllis edentata, *Dilsea californica*, *Fuscifolium papenfussii* and *Salishia firma* were found further west than they had been previously. *Haplogloia andersonii* had previously been known only as far west as the east side of lower Cook Inlet. The undescribed species of *Halosaccion* epiphytic on other Palmariaceae was recorded as far west as Castle Bay; it had previously been known only from lower Cook Inlet. *Phyllospadix serrulatus* was collected further west, at Chignik Bay, than previously known (Alinchak Bay). It remains unknown whether these new records are species that have been in the area for a long time or whether they represent examples of species expansion, which is ongoing since the last glaciation. A single collection was tentatively identified as *Boreophyllum aleuticum*. This tentative identification needs to be confirmed. If correct, then the collection from Garden Island would represent an eastern record of this species, previously known only from the Aleutian Islands (Lindstrom et al. 2015). Other species with predominantly western Pacific distributions, such as *Mastocarpus pacificus*, occur as far east as lower Cook Inlet, and *Halosaccion firmum* has been found as far east as western Prince William sound. *Dumontia simplex*, *Mikamiella ruprechtiana* and *Pyropia taeniata* occur as far east as Southeast Alaska, and *Mazzaella phyllocarpa* reaches the Queen Charlotte Islands in northern British Columbia.

The diversity of habitats visited ensured a representative sampling of species occurring in this region. A number of species occurred at most if not all of the sites (Table 4). *Polyostea bipinnata* and *Ulva lactuca* were the most ubiquitous, followed by *Fucus distichus* and *Halosaccion glandiforme*. This was similar to rocky sites in Prince William Sound, where most of the species in Table 4 also were important elements of the flora, but *Fucus* was clearly the dominant species, and *Alaria* was entirely absent (Lindstrom et al. 1999). All species in Table 4 are all widely distributed in the northeast Pacific and have a variety of phenologies. Other species were more limited in distribution; 24 species were recorded at just a single site and 18 species at just two sites.

Table 4. -- Species recorded at 70% or more of the Alaska Peninsula sites visited and their seasonality.

Species	Occurrence	Seasonality
Polyostea bipinnata	96%	perennial
Ulva lactuca	96%	annual
Fucus distichus	93%	perennial
Halosaccion glandiforme	93%	annual
Alaria marginata	85%	annual
Cryptosiphonia woodii	85%	seasonal
Monostroma grevillei	85%	seasonal
Devaleraea mollis	81%	annual (blade seasonal)
Scytosiphon lomentaria	78%	seasonal
Odonthalia floccosa	74%	perennial
Palmaria hecatensis	74%	annual
Melanosiphon intestinalis	70%	annual

platyphylla, *Nemalion helminthoides*, *Ptilota hypnoides*, *Pneophyllum zostericola*, *Polysiphonia hendryi* var. *luxurians*, *P. paniculata*, *Pyropia perforata*, *Pterothamnion villosum*, *Rhodophysema georgii* and *Salishia firma*.

Seasonality plays an important role in the observed community structure of intertidal-subtidal flora at boreal latitudes. We visited the Alaska Peninsula at an optimal time of year for catching the new growth of seaweeds, including ephemeral and annual as well as perennial species. The abundance of *Pyropia torta* and *P. pseudolanceolata*, normally winter species at more southerly latitudes (Gabrielson & Lindstrom 2018), was recognized as the Winter Laver bioband at five sites, and these species contributed to other bands when insufficient to warrant their own. The ephemeral uprights of *Gloiopeltis furcata* contributed to the biota, ranging from the high intertidal Winter Laver bioband to the mid intertidal Rockweed bioband; they were sufficiently abundant at Site 18 to warrant the designation of a Red Algae bioband dominated by that species. Other species likely at their seasonal peaks in abundance include *Cryptosiphonia woodii*, *Palmaria mollis* and *Tokidadendron bullatum* among red algae, *Petalonia fascia* and *Scytosiphon lomentaria* among brown algae, and *Monostroma grevillei* and *Pseudothrix borealis* among green algae. Species like *Polyostea bipinnata*, while persisting through the summer, are so targeted by invertebrate grazers that their abundance and condition deteriorate significantly as the year progresses.

On the other hand, some species that one would expect to find along the Alaska Peninsula were not evident. As noted above, for some, this is the result of the May sampling date. Species like *Chordaria flagelliformis*, *Eudesme virescens*, and *Saundersella simplex* all of which have an alternation of microscopic gametophyte with macroscopic sporophyte, are expected to make their appearance or become more abundant on these shores as summer progresses. This is also true of *Boreophyllum aestivalis*, so named because its appearance is largely restricted to actual summer months, and its sibling species *B. ambiguum*.

A significant gap in our knowledge of benthic marine algae from the Alaska Peninsula has been filled. Information provided here will help ShoreZone users resolve local and regional scale differences among biobands and coastal species assemblages, an it establishes a baseline for potential changes through time. We have documented what species actually occur in the region, including a number of new records, which were unexpected. Overall, our primary objectives have been met by this thorough assessment and extensive digital catalog.

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APPENDIX A:

Table A-1. -- Systematic classification of seaweeds observed on the Alaska Peninsula, May 2016.

Taxonomic Listing
Phylum Chlorophyta
Class Siphonocladophyceae
Order Cladophorales
Family Cladophoraceae
Chaetomorpha melagonium (F.Weber & Mohr) Kützing
Chaetomorpha sp.
Cladophora sericea (Hudson) Kützing
Class Trebouxiophyceae
Order Prasiolales
Family Prasiolaceae
Prasiola borealis M. Reed [no herbarium voucher]
Rosenvingiella polyrhiza (Rosenvinge) P.C.Silva
Class Ulvophyceae
Order Ulotrichales
Family Gomontiaceae
Monostroma grevillei (Thuret) Wittrock
Family Ulotrichaceae
Acrosiphonia arcta (Dillwyn) Gain
Acrosiphonia coalita (Ruprecht) Scagel, Garbary, Golden & M.W.Hawkes
Acrosiphonia duriuscula (Ruprecht) Yendo
Acrosiphonia sonderi (Kützing) Kornmann
Acrosiphonia sp.
Pseudothrix borealis Hanic & S.C. Lindstrom
Ulothrix flacca (Dillwyn) Thuret
Urospora neglecta (Kornmann) Lokhorst & Trask
Order Ulvales
Family Kornmanniaceae
Blidingia minima (Nägeli *ex* Kützing) Kylin
Kornmannia leptoderma (Kjellman) Bliding
Family Ulvaceae
Ulva intestinalis Linnaeus[2]
Ulva lactuca Linnaeus
Ulva linza Linnaeus
Ulva prolifera O.F.Müller[1]

[2] Observed but not collected.

Ulvaria obscura (Kützing) Gayral var. *blyttii* (Areschoug) Bliding

Phylum Ochrophyta
Class Phaeophyceae
Order Sphacelariales
Family Sphacelariaceae
Sphacelaria rigidula Kützing

Order Desmarestiales
Family Desmarestiaceae
Desmarestia aculeata (Linnaeus) J.V. Lamouroux
Desmarestia viridis (O.F. Müller) J.V. Lamouroux[no herbarium voucher]

Order Ectocarpales
Family Acinetosporaceae
Pylaiella littoralis (Linnaeus) Kjellman [no herbarium voucher]

Family Chordariaceae
Chordaria flagelliformis (O.F.Müller) C.Agardh
Coilodesme bulligera Strömfelt
Coilodesme californica (Ruprecht) Kjellman
Dictyosiphon foeniculaceus (Hudson) Greville [no herbarium voucher]
Elachista fucicola (Velley) Areschoug
**Haplogloia andersonii* (Farlow) Levring
Leathesia marina (Lyngbye) Decaisne
Myrionema balticum (Reinke) Foslie
Punctaria sp.
Soranthera ulvoidea Postels & Ruprecht

Family Scytosiphonaceae
Colpomenia bullosa (D.A.Saunders) Yamada
Colpomenia peregrina Sauvageau
Melanosiphon intestinalis (D.A.Saunders) M.J.Wynne
Petalonia fascia (O.F.Müller) Kuntze
"Ralfsia" phase
Scytosiphon lomentaria (Lyngbye) Link

Order Fucales
Family Fucaceae
Fucus distichus Linnaeus

Family Sargassaceae
Stephanocystis geminata (C. Agardh) Draisma, Ballesteros, F.Rousseau & T.Thibaut

Order Laminariales
Family Agaraceae
Agarum clathratum Dumortier

Costaria costata (C.Agardh) D.A.Saunders

Family Alariaceae
Alaria marginata Postels & Ruprecht
Eualaria fistulosa (Postels & Ruprecht) M.J.Wynne

Family Laminariaceae
Cymathaere triplicata (Postels & Ruprecht) J.Agardh
Laminaria longipes Bory
Laminaria setchellii P.C.Silva [no herbarium voucher]
Laminaria sp. nov.
Laminaria yezoensis Miyabe
Nereocystis luetkeana (K.Mertens) Postels & Ruprecht
Saccharina latissima (Linnaeus) C.E.Lane, C.Mayes, Druehl & G.W.Saunders
Saccharina nigripes (J.Agardh) Longtin & G.W.Saunders
Synonyms: *Laminaria groenlandica* sensu Druehl; *Saccharina groenlandica* sensu Druehl
Saccharina druehlii G.W.Saunders & McDevit or *S. sessilis* (C.Agardh) Kuntze [cannot determine which without sequence data]

Order Ralfsiales
Family Ralfsiaceae
Analipus japonicus (Harvey) M.J.Wynne
Ralfsia fungiformis (Gunnerus) Setchell & N.L.Gardner

Phylum Rhodophyta
Class Bangiophyceae
Order Bangiales
Family Bangiaceae
"*Bangia* 2" sp. 1
"*Bangia* 3" sp. 1
"*Bangia* 3" sp. 2 (including a distinct genetic variant)
*cf. *Boreophyllum aleuticum* S.C. Lindstrom & M.R. Lindeberg [requires confirmation]
**Fuscifolium papenfussii* (V. Krishnamurthy) S.C. Lindstrom
Pyropia abbottiae (V. Krishnamurthy) S.C. Lindstrom
Pyropia fallax (S.C. Lindstrom & K.M. Cole) S.C. Lindstrom
Pyropia fucicola (V. Krishnamurthy) S.C. Lindstrom
Pyropia kurogii (S.C. Lindstrom) S.C. Lindstrom
Pyropia nereocystis (C.L. Anderson) S.C. Lindstrom (drift)
Pyropia pseudolanceolata (V. Krishnamurthy) S.C. Lindstrom
Pyropia taeniata S.C. Lindstrom
Pyropia torta (V. Krishnamurthy) S.C. Lindstrom
Pyropia unabbottiae S.C. Lindstrom
Wildemania cuneiformis (Setchell & Hus) S.C. Lindstrom
Sometimes called *Wildemania amplissima* (Kjellman) Foslie
[Wildemania norrisii (V. Krishnamurthy) S.C. Lindstrom: recorded but not confirmed]
Wildemania variegata (Kjellman) De Toni

Taxonomic Listing

Class Florideophyceae
Order Hildenbrandiales
Family Hildenbrandiaceae
Hildenbrandia rubra (Sommerfelt) Meneghini [no herbarium voucher]

Order Ahnfeltiales
Family Ahnfeltiaceae
Ahnfeltia fastigiata (Endlicher) Makienko

Order Corallinales
Family Corallinaceae
Bossiella frondescens (Postels & Ruprecht) E.Y. Dawson
Syn.: *Corallina frondescens* Postels & Ruprecht
Corallina officinalis Linnaeus
Synonyms: *Bossiella cretacea* (Postels & Ruprecht) H.W. Johansen, *Pachyarthron cretaceum* (Postels & Ruprecht) Manza
Corallina vancouveriensis Yendo [no herbarium voucher]

Order Hapalidiales
Clathromorphum sp.
Lithothamnion phymatodeum Foslie
Neopolyporolithon reclinatum (Foslie) W.H. Adey

Order Acrochaetiales
Family Rhodochortonaceae
Rhodochorton purpureum (Lightfoot) Rosenvinge

Order Palmariales
Family Palmariaceae
Devaleraea callophylloides (M.W. Hawkes & Scagel) G.W. Saunders, C.J. Jackson & Salomaki
Synonym: *Palmaria callophylloides* M.W. Hawkes & Scagel
Devaleraea mollis (Setchell & N.L. Gardner) G.W. Saunders, C.J. Jackson & Salomaki
Synonym: *Palmaria mollis* (Setchell & N.L. Gardner) van der Meer & C.J. Bird
Halosaccion firmum (Postels et Ruprecht) Kützing
Halosaccion glandiforme (S.G. Gmelin) Ruprecht
Halosaccion sp. nov. (epiphytic)
Palmaria hecatensis M.W. Hawkes
Palmaria sp. nov. (drift)

Order Ceramiales
Family Ceramiaceae
Antithamnionella pacifica (Harvey) E.M. Wollaston
Callithamnion pikeanum Harvey
Ceramium pacificum (Collins) Kylin
Microcladia borealis Ruprecht
Scagelia occidentale (Kylin) E.M. Wollaston

Taxonomic Listing

Family Delesseriaceae
Membranoptera spinulosa (Ruprecht) Kuntze
Mikamiella ruprechtiana (Zinova) M.J. Wynne
Phycodrys fimbriata (Kuntze) Kylin
Tokidadendron bullatum (N.L. Gardner) M.J. Wynne

Family Rhodomelaceae
Neorhodomela aculeata (Perestenko) Masuda
Neorhodomela oregona (Doty) Masdua
Odonthalia floccosa (Esper) Falkenberg
Odonthalia floccosa f. *comosa* Setchell & N.L. Gardner
Odonthalia kamtschatica (Ruprecht) J. Agardh
Odonthalia setacea (Ruprecht) Perestenko
Polyostea bipinnata (Postels & Ruprecht) Ruprecht
Synonym: *Pterosiphonia bipinnata* (Postels et Ruprecht) Falkenberg
Polysiphonia pacifica Hollenberg [no image]
Polysiphonia senticulosa Harvey
Polysiphonia sp.

Family Wrangeliaceae
Ptilota asplenioides (Esper) C. Agardh
Ptilota serrata Kützing

Order Gigartinales
Family Dumontiaceae
Constantinea subulifera Setchell
Cryptosiphonia woodii (J. Agardh) J. Agardh
**Dilsea californica* (J. Agardh) Kuntze
Dumontia alaskana V. Tai, S.C. Lindstrom & G.W. Saunders
Dumontia simplex Cotton

Family Endocladiaceae
Endocladia muricata (Endlicher) J. Agardh
Gloiopeltis furcata (Postels & Ruprecht) J. Agardh

Family Furcellariaceae
Turnerella mertensiana (Postels & Ruprecht) Schmitz

Family Gigartinaceae
Mazzaella parksii (Setchell & N.L. Gardner) Hughey, P.C. Silva & Hommersand
Mazzaella parvula (Kjellman) P.W. Gabrielson, S.C. Lindstrom, Hughey & Hommersand
Mazzaella phyllocarpa (Postels & Ruprecht) Perestenko

Family Kallymeniaceae
Callophyllis cf. edentata sensu Clarkston & Saunders
Euthora cristata (C. Agardh) J. Agardh (drift)
Kallymeniopsis sp.

Taxonomic Listing
**Salishia firma* Kylin
Family Phyllophoraceae
Mastocarpus alaskensis S.C. Lindstrom, Hughey & Martone
Mastocarpus latissimus (Harvey) S.C. Lindstrom, Hughey & Martone
Mastocarpus pacificus (Kjellman) Perestenko
Petrocelis (sporophyte phase of *Mastocarpus* spp.)
Order Rhodymeniales
Family Rhodymeniaceae
Sparlingia pertusa (Postels & Ruprecht) G.W. Saunders, I.M. Strachan & Kraft
Order Nemastomatales
Family Schizymeniaceae
Schizymenia pacifica (Kylin) Kylin

*New distribution record

Table A-2. -- Systematic classification of seagrasses observed on the Alaska Peninsula, May 2016.

Taxonomic Listing
Phylum Anthophyta
Class Monootyledonae
Order Alismatales
Family Zosteraeae
Phyllospadix serrulatus Ruprecht ex Ascherson
Zostera marina Linnaeus

APPENDIX B:

Table B-1. -- Phylum Chlorophyta (Green Algae) – List of voucher specimens and *in situ* photographs from the Alaska Peninsula, May 2016 found in the benthic marine algae digital catalog (Appendix C).

	Pressing #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
1	SCL# 16052	Acrosiphonia sp 001.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
2	SCL# 16053	Acrosiphonia arcta 002.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
3	SCL# 16109	Acrosiphonia arcta 003.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
4	SCL# 16152	Acrosiphonia arcta 004.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
5	SCL# 16238	Acrosiphonia arcta 005.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
6	*in situ*	Acrosiphonia arcta 006.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
7	*in situ*	Acrosiphonia arcta 007.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
8	SCL# 16280	Acrosiphonia coalita 001.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
9	SCL# 16047	Acrosiphonia coalita 002.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
10	*in situ*	Acrosiphonia coalita 003.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
11	*in situ*	Acrosiphonia coalita 005.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
12	SCL# 16097	Acrosiphonia duriuscula 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
13	ML-SS #0001	Acrosiphonia duriuscula 002.jpg	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
14	*in situ*	Acrosiphonia duriuscula 003.jpg	North of Takli Island, Russian Anchorage	AKP16_011	05/12/16	N58.07936 W154.46570
15	SCL# 16140	Acrosiphonia sonderi 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
16	*in situ*	Acrosiphonia sonderi 002.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
17	*in situ*	Acrosiphonia sonderi 003.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
18	*in situ*	Acrosiphonia sonderi 004.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
19	*in situ*	Acrosiphonia sonderi 005.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
20	SCL# 16258	Blidingia minima 001.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
21	ML-SS #0067	Blidingia minima 002.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
22	*in situ*	Blidingia minima 003.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
23	*in situ*	Blidingia minima 004.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442

	Pressing #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
24	SCL# 16262	Chaetomorpha sp 001.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
25	SCL# 16102	Cladophora sericea 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
26	SCL# 16283	Kornmannia leptoderma 001.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
27	SCL# 16283-2	Kornmannia leptoderma 002.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
28	SCL# 16131	Kornmannia leptoderma 003.JPG	Portage Bay, Kuiukta Bay	AKP16_016	05/21/16	N56.18575 W158.46142
29	SCL# 16082	Monostroma grevillei 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
30	*in situ*	Monostroma grevillei 002.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
31	*in situ*	Monostroma grevillei 003.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
32	SCL# 16078	Pseudothrix borealis 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
33	SCL# 16206	Pseudothrix borealis 002.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
34	*in situ*	Pseudothrix borealis 003.jpg	North of Takli Island, Russian Anchorage	AKP16_011	05/12/16	N58.07936 W154.46570
35	*in situ*	Pseudothrix borealis 004.jpg	North of Takli Island, Russian Anchorage	AKP16_011	05/12/16	N58.07936 W154.46570
36	SCL# 16214	Rosenvingiella polyrhiza 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
37	*in situ*	Rosenvingiella polyrhiza 002.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
38	*in situ*	Rosenvingiella polyrhiza 003.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
39	*in situ*	Rosenvingiella polyrhiza 004.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
40	SCL# 16145	Ulothrix flacca 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
41	*in situ*	Ulothrix flacca 002.jpg	North of Takli Island, Russian Anchorage	AKP16_011	05/12/16	N58.07936 W154.46570
42	*in situ*	Ulothrix flacca 003.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
43	*in situ*	Ulothrix flacca 004.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
44	*in situ*	Ulothrix flacca 005.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
45	*in situ*	Ulothrix flacca 006.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
46	SCL# 16161	Ulva lactuca 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
47	SCL# 16092	Ulva lactuca 002.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
48	SCL# 16281	Ulva lactuca 003.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
49	ML-SS #0095	Ulva lactuca 004.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
50	*in situ*	Ulva lactuca 005.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
51	UBC 16112	Ulva linza 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
52	*in situ*	Ulva linza 002.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646

	Pressing #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
53	SCL# 16221	Ulvaria obscura var blyttii 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
54	SCL# 16134	Urospora neglecta 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
55	SCL# 16197	Urospora neglecta 002.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
56	*in situ*	Urospora neglecta 003.JPG	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
57	*in situ*	Urospora neglecta 004.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442

Table B-2. -- Phylum Ochrophyta (Brown Algae) – List of voucher specimens and in situ photographs from the Alaska Peninsula, May 2016 found in the benthic marine algae digital catalog (Appendix C).

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
1	SCL# 16219	Agarum clathratum 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
2	SCL# 16229	Alaria marginata 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
3	ML-SS #0002	Alaria marginata 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
4	ML-SS #0003	Alaria marginata 003.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
5	ML-SS #0004	Alaria marginata 004.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
6	ML-SS #0005	Alaria marginata 005.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
7	ML-SS #0006-1	Alaria marginata 006.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
8	ML-SS #0007	Alaria marginata 007.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
9	*in situ*	Alaria marginata 008.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
10	*in situ*	Alaria marginata 009.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
11	*in situ*	Alaria marginata 010.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
12	*in situ*	Alaria marginata 011.jpg	Sutwik Island	AKP16_007	05/08/16	N56.57624 W157.23144
13	*in situ*	Alaria marginata 012.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
14	SCL# 16089	Analipus japonicus 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
15	SCL# 16168	Analipus japonicus 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
16	ML-SS #0008	Analipus japonicus 003.jpg	Sutwik Island	AKP16_007	05/09/16	N56.57624 W157.23144

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
17	ML-SS #0009	Analipus japonicus 004.jpg	Sutwik Island	AKP16_007	05/09/16	N56.57624 W157.23144
18	ML-SS #0010	Analipus japonicus 005.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
19	ML-SS #0011	Analipus japonicus 006.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
20	*in situ*	Analipus japonicus 007.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
21	SCL# 16123-1	Coilodesme bulligera 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
22	SCL# 16123-2	Coilodesme bulligera 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
23	SCL# 16164	Coilodesme bulligera 003.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
24	SCL# 16271	Coilodesme bulligera 004.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
25	ML-SS #0014	Coilodesme bulligera 005.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
26	ML-SS #0015	Coilodesme bulligera 006.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
27	SCL# 16124	Coilodesme californica 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
28	SCL# 16159	Coilodesme californica 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
29	ML-SS #0016	Coilodesme californica 003.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
30	SCL# 16273	Colpomenia bullosa 001.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
31	ML-SS #0017	Colpomenia bullosa 002.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
32	ML-SS #0018	Colpomenia peregrina 001.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
33	SCL# 16225	Costaria costata 001.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
34	ML-SS #0019	Costaria costata 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
35	*in situ*	Costaria costata 003.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
36	*in situ*	Costaria costata 004.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
37	ML-SS #0022	Cymathaere triplicata 001.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
38	*in situ*	Cymathaere triplicata 002.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
39	*in situ*	Cymathaere triplicata 003.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
40	*in situ*	Cymathaere triplicata 004.jpg	Choweit Is., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
41	*in situ*	Cymathaere triplicata 005.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
42	SCL# 16230	Desmarestia aculeata 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
43	SCL# 16234	Desmarestia aculeata 002.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
44	ML-SS #0023	Desmarestia aculeata 003.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
45	SCL# 16128	Elachista fucicola 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
46	SCL# 16246	Eualaria fistulosa 001.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
47	*in situ*	Fucus distichus 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
48	*in situ*	Fucus distichus 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
49	SCL# 16194	Haplogloia andersonii 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
50	*in situ*	Laminaria longipes 001.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
51	*in situ*	Laminaria longipes 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
52	*in situ*	Laminaria longipes 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
53	*in situ*	Laminaria longipes 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
54	*in situ*	Laminaria setchelli 001.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
55	*in situ*	Laminaria setchelli 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
56	ML-SS #0028-2	Laminaria sp nov 001.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
57	ML-SS #0006-2	Laminaria sp nov 002.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
58	ML-SS #0028-1	Laminaria sp nov 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
59	SCL# 16200	Laminaria sp nov 004.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
60	ML-SS #0078	Laminaria sp nov 005.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
61	SCL# 16289	Laminaria sp nov 006.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
62	SCL# 16200-2	Laminaria sp nov 008.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
63	SCL# 16201	Laminaria sp nov 009.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
64	*in situ*	Laminaria sp nov 010.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
65	SCL# 16216	Laminaria yezoensis 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
66	ML-SS #0028-2	Laminaria yezoensis 002.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
67	*in situ*	Laminaria yezoensis 003.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
68	SCL# 16212	Leathesia marina 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
69	SCL# 16104	Melanosiphon intestinalis 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
70	*in situ*	Melanosiphon intestinalis 002.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
71	SCL# 16225-2	Myrionema balticum 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
72	SCL# 16225	Myrionema balticum 002.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
73	SCL# 16166	Nereocystis luetkeana 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
74	ML-SS #0039	Nereocystis luetkeana 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
75	*in situ*	Nereocystis luetkeana 003.jpg	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
76	SCL# 16126	Petalonia fascia 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
77	SCL# 16167	Petalonia fascia 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
78	SCL# 16167-2	Petalonia fascia 003.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
79	SCL# 16287	Petalonia fascia 004.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
80	*in situ*	Petalonia fascia 005.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
81	*in situ*	Petalonia fascia 006.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
82	SCL# 16239	Punctaria sp 001.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
83	*in situ*	Pylaiella littoralis 001.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
84	*in situ*	Pylaiella littoralis 002.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
85	SCL# 16122	Ralfsia fungiformis 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
86	SCL# 16191	Ralfsia fungiformis 002.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
87	*in situ*	Ralfsia fungiformis 003.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
88	*in situ*	Ralfsia fungiformis 004.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
89	ML-SS #0079	Saccharina 001.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
90	SCL# 16170	Saccharina cf nigripes 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
91	*in situ*	Saccharina cf nigripes 002.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
92	SCL# 16118	Saccharina latissima 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
93	SCL# 16228	Saccharina latissima 002.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
94	SCL# 16218	Saccharina latissima 003.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
95	*in situ*	Saccharina latissima 004.JPG	Portage Bay	AKP16_015	05/21/16	N56.17856 W158.51953
96	ML-SS #0076	Saccharina sessilis (or S druehlii or S nigripes) 001.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
97	ML-SS #0077	Saccharina sessilis (or S druehlii or S nigripes) 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
98	SCL# 16209	Saccharina sessilis (or S druehlii) 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
99	SCL# 16215	Saccharina sessilis (or S druehlii) 002.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
100	*in situ*	Saccharina sessilis (or S druehlii) 003.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
101	SCL# 16077	Scytosiphon lomentaria 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
102	ML-SS #0081	Scytosiphon lomentaria 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
103	ML-SS #0082	Scytosiphon lomentaria 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
104	ML-SS #0083	Scytosiphon lomentaria 004.jpg	Sutwik Island	AKP16_007	05/09/16	N56.57624 W157.23144
105	ML-SS #0084	Scytosiphon lomentaria 005.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
106	*in situ*	Scytosiphon lomentaria 006.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
107	*in situ*	Scytosiphon lomentaria 007.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
108	*in situ*	Scytosiphon lomentaria 008.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
109	*in situ*	Scytosiphon lomentaria 009.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
110	SCL# 16173	Soranthera ulvoidea 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
111	SCL# 16269	Soranthera ulvoidea 002.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
112	ML-SS #0085	Soranthera ulvoidea 003.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
113	*in situ*	Soranthera ulvoidea 004.JPG	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
114	*in situ*	Soranthera ulvoidea 005.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
115	SCL# 16226	Sphacelaria rigidula 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
116	SCL# 16198	Stephanocystis geminata 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
117	ML-SS #0091	Stephanocystis geminata 002.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
118	ML-SS #0092	Stephanocystis geminata 003.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
119	*in situ*	Stephanocystis geminata 004.jpg	Sutwik Island	AKP16_007	05/08/16	N56.57624 W157.23144

Table B-3. -- Phylum Rhodophyta (Red Algae) – List of voucher specimens and in situ photographs from the Alaska Peninsula, May 2016 found in the benthic marine algae digital catalog (Appendix C).

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
1	SCL# 16270	Ahnfeltia fastigiata 001.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
2	*in situ*	Ahnfeltia fastigiata 002.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
3	SCL# 16072	Antithamnionella pacifica 001.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
4	SCL# 16157-1	Antithamnionella pacifica 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
5	SCL# 16157-2	Antithamnionella pacifica 003.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
6	SCL# 16116	''Bangia 2'' sp 1 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
7	SCL# 16113	''Bangia 2'' sp 1 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
8	SCL# 16114	''Bangia 2'' sp 1 003.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
9	SCL# 16115	''Bangia 2'' sp 1 004.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
10	SCL# 16117	''Bangia 2'' sp 1 005.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
11	ML-SS #0012	''Bangia 2'' sp 1 006.jpg	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
12	*in situ*	''Bangia 2'' sp 1 007.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
13	*in situ*	''Bangia 2'' sp 1 008.JPG	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
14	*in situ*	''Bangia 2'' sp 1 009.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
15	*in situ*	''Bangia 2'' sp 1 010.JPG	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
16	SCL# 16139	''Bangia 3'' sp 1 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
17	SCL# 16264	''Bangia 3'' sp 3 001.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
18	SCL# 16081	''Bangia 3'' sp 3 variant 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
19	SCL# 16184	''Bangia 3'' sp 3 variant 002.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
20	SCL# 16235	''Bangia 3'' sp 3 variant 003.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
21	*in situ*	''Bangia'' sp 001.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
22	*in situ*	''Bangia'' sp 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
23	SCL# 16256	Boreophyllum cf aleuticum 001.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
24	SCL# 16073	Bossiella frondescens 001.jpg	Mitrofania Bay	AKP16_012	05/20/16	N55.97508 W158.73828
25	*in situ*	Bossiella frondescens 002.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
26	ML-SS #0013	Callophyllis sp 001.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
27	SCL# 16127	Ceramium cf pacificum 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
28	SCL# 16242	Ceramium pacificum 001.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
29	*in situ*	Clathromorphum & Lithothamnion 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
30	*in situ*	Clathromorphum & Lithothamnion 002.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
31	*in situ*	Clathromorphum & Lithothamnion 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
32	SCL# 16207	Constantinea subulifera 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
33	*in situ*	Constantinea subulifera 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
34	SCL# 16120	Corallina officinalis 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
35	*in situ*	Corallina officinalis 002.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
36	SCL# 16098	Cryptosiphonia woodii 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
37	ML-SS #0020	Cryptosiphonia woodii 002.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
38	ML-SS #0021	Cryptosiphonia woodii 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
39	SCL# 16046	Devaleraea callophylloides 001.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
40	ML-SS #0048	Devaleraea callophylloides 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
41	ML-SS #0049	Devaleraea callophylloides 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
42	ML-SS #0050	Devaleraea callophylloides 004.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
43	*in situ*	Devaleraea callophylloides 005.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
44	*in situ*	Devaleraea callophylloides 006.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
45	*in situ*	Devaleraea callophylloides 007.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
46	SCL# 16285	Devaleraea callophylloides hollow form 001.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
47	ML-SS #0051	Devaleraea callophylloides hollow form 002.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
48	ML-SS #0052	Devaleraea callophylloides hollow form 003.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
49	*in situ*	Devaleraea callophylloides hollow form 004.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
50	ML-SS #0054	Devaleraea mollis 001.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
51	ML-SS #0055	Devaleraea mollis 002.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
52	ML-SS #0056	Devaleraea mollis 003.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
53	ML-SS #0053	Devaleraea mollis 004.jpg	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
54	ML-SS #0057	Devaleraea mollis 005.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
55	ML-SS #0058	Devaleraea mollis 006.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
56	SCL# 16172	Devaleraea mollis 007.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
57	SCL# 16224	Devaleraea mollis 008.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
58	SCL# 16282	Devaleraea mollis 009.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
59	ML-SS #0063	Devaleraea mollis 010.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
60	ML-SS #0064	Devaleraea mollis 011.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
61	*in situ*	Devaleraea mollis 012.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
62	*in situ*	Devaleraea mollis 013.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
63	*in situ*	Devaleraea mollis 014.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
64	SCL# 16196	Dilsea californica 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
65	*in situ*	Dilsea californica 002.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
66	*in situ*	Dilsea californica 003.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
67	*in situ*	Dilsea californica 004.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
68	SCL# 16095	Dumontia alaskana 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
69	ML-SS #0024	Dumontia alaskana 002.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
70	ML-SS #0025	Dumontia alaskana 003.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
71	*in situ*	Dumontia alaskana 004.JPG	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
72	SCL# 16279	Dumontia simplex 001.jpg	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
73	*in situ*	Dumontia simplex 002.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
74	SCL# 16135	Endocladia muricata 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
75	*in situ*	Endocladia muricata 002.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
76	SCL# 16237	Euthora cristata 001.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
77	SCL# 16133	Fuscifolium papenfussii 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
78	SCL# 16087	Gloiopeltis furcata 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
79	SCL# 16125	Gloiopeltis furcata 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
80	SCL# 16146	Gloiopeltis furcata 003.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
81	*in situ*	Gloiopeltis furcata 004.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
82	*in situ*	Gloiopeltis furcata 005.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
83	*in situ*	Gloiopeltis furcata 006.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
84	*in situ*	Gloiopeltis furcata 007.JPG	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
85	SCL# 16108	Halosaccion 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
86	SCL# 16236	Halosaccion firmum 001.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
87	ML-SS #0026	Halosaccion firmum 002.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
88	*in situ*	Halosaccion firmum 003.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
89	*in situ*	Halosaccion firmum 004.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
90	*in situ*	Halosaccion firmum 005.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
91	*in situ*	Halosaccion firmum 006.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
92	SCL# 16105	Halosaccion glandiforme 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
93	SCL# 16119	Halosaccion glandiforme 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
94	SCL# 16254	Halosaccion glandiforme 003.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
95	*in situ*	Halosaccion glandiforme 004.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
96	*in situ*	Halosaccion glandiforme 005.JPG	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
97	SCL# 16141	Halosaccion sp nov 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
98	SCL# 16223	Halosaccion sp nov 002.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
99	SCL# 16248	Halosaccion sp nov 003.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
100	*in situ*	Hildenbrandia rubra 001.jpg	Port Wrangell	AKP16_37v	05/10/16	N57.04739 W156.60646
101	ML-SS #0027	Kallymeniopsis sp 001.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
102	SCL# 16142	Mastocarpus alaskensis 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
103	*in situ*	Mastocarpus alaskensis 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
104	*in situ*	Mastocarpus alaskensis 003.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
105	*in situ*	Mastocarpus alaskensis 004.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
106	SCL# 16049	Mastocarpus latissimus 001.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
107	SCL# 16090	Mastocarpus latissimus 002.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
108	SCL# 16094	Mastocarpus latissimus 003.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
109	SCL# 16210	Mastocarpus latissimus 004.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
110	SCL# 16267	Mastocarpus latissimus 005.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
111	*in situ*	Mastocarpus latissimus 006.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
112	*in situ*	Mastocarpus latissimus 007.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
113	SCL# 16111	Mastocarpus pacificus 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
114	*in situ*	Mazzaella parksii 001.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03983 W156.74269
115	*in situ*	Mazzaella parksii 002.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03983 W156.74269
116	*in situ*	Mazzaella parksii 003.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03983 W156.74269
117	*in situ*	Mazzaella parksii 004.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03983 W156.74269
118	*in situ*	Mazzaella parksii 005.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03983 W156.74269
119	SCL# 16288	Mazzaella parvula 001.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
120	SCL# 16165	Mazzaella parvula 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
121	SCL# 16176	Mazzaella parvula 003.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
122	SCL# 16251B	Mazzaella parvula 004.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
123	SCL# 16251	Mazzaella parvula 005.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
124	ML-SS #0032	Mazzaella parvula 006.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
125	SCL# 16110	Mazzaella phyllocarpa 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
126	SCL# 16110-2	Mazzaella phyllocarpa 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
127	SCL# 16222	Mazzaella phyllocarpa 003.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
128	ML-SS #0029	Mazzaella phyllocarpa 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
129	ML-SS #0030	Mazzaella phyllocarpa 005.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
130	ML-SS #0031	Mazzaella phyllocarpa 006.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
131	*in situ*	Mazzaella phyllocarpa 007.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
132	SCL# 16169	Membranoptera spinulosa 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
133	SCL# 16136	Microcladia borealis 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
134	SCL# 16148	Mikamiella ruprechtiana 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
135	SCL# 16204	Mikamiella ruprechtiana 002.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
136	SCL# 16211	Mikamiella ruprechtiana 003.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
137	SCL# 16253-1	Mikamiella ruprechtiana 004.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
138	SCL# 16253-2	Mikamiella ruprechtiana 005.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
139	ML-SS #0033	Mikamiella ruprechtiana 006.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
140	ML-SS #0034	Mikamiella ruprechtiana 007.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
141	ML-SS #0035	Mikamiella ruprechtiana 008.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
142	SCL# 16192	Neopolyporolithon reclinatum 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
143	SCL# 16121	Neorhodomela aculeata 001.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
144	SCL# 16174	Neorhodomela aculeata 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
145	*in situ*	Neorhodomela aculeata 003.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
146	SCL# 16147	Neorhodomela oregona 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
147	*in situ*	Neorhodomela oregona 002.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
148	*in situ*	Neorhodomela oregona 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
149	SCL# 16091	Odonthalia floccosa 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
150	ML-SS #0041	Odonthalia floccosa 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
151	ML-SS #0043	Odonthalia floccosa 003.jpg	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
152	ML-SS #0044	Odonthalia floccosa 004.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
153	ML-SS #0045	Odonthalia floccosa 005.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
154	*in situ*	Odonthalia floccosa 006.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
155	*in situ*	Odonthalia floccosa 007.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
156	*in situ*	Odonthalia floccosa 008.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
157	*in situ*	Odonthalia floccosa 009.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
158	*in situ*	Odonthalia floccosa 010.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
159	SCL# 16074	Odonthalia floccosa f comosa 001.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
160	ML-SS #0042	Odonthalia floccosa f comosa 002.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
161	*in situ*	Odonthalia floccosa f comosa 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
162	*in situ*	Odonthalia floccosa f comosa 004.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
163	*in situ*	Odonthalia floccosa f comosa 005.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
164	SCL# 16189	Odonthalia kamtschatica 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
165	ML-SS #0040	Odonthalia kamtschatica 002.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
166	*in situ*	Odonthalia kamtschatica 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
167	*in situ*	Odonthalia kamtschatica 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
168	SCL# 16208	Odonthalia setacea 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
169	ML-SS #0046	Odonthalia setacea 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
170	ML-SS #0047	Odonthalia setacea 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
171	SCL# 16045	Palmaria hecatensis 001.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
172	SCL# 16272	Palmaria hecatensis 002.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
173	ML-SS #0059	Palmaria hecatensis 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
174	ML-SS #0060	Palmaria hecatensis 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
175	ML-SS #0061	Palmaria hecatensis 005.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
176	ML-SS #0062	Palmaria hecatensis 006.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
177	*in situ*	Palmaria hecatensis 007.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
178	*in situ*	Palmaria hecatensis 008.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
179	*in situ*	Palmaria hecatensis 009.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
180	SCL# 16240	Palmaria sp nov 001.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
181	SCL# 16190	Phycodrys fimbriata 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
182	ML-SS #0065	Phycodrys fimbriata 002.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
183	ML-SS #0066	Phycodrys fimbriata 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
184	SCL# 16076	Polyostea bipinnata 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
185	SCL# 16155	Polyostea bipinnata 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
186	ML-SS #0068	Polyostea bipinnata 003.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
187	ML-SS #0069	Polyostea bipinnata 004.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
188	ML-SS #0070	Polyostea bipinnata 005.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
189	ML-SS #0071	Polyostea bipinnata 006.jpg	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
190	*in situ*	Polyostea bipinnata 007.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
191	*in situ*	Polyostea bipinnata 008.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
192	*in situ*	Polyostea bipinnata 009.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
193	*in situ*	Polyostea bipinnata 010.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
194	*in situ*	Polyostea bipinnata 011.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
195	SCL# 16096	Polysiphonia 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
196	SCL# 16156	Polysiphonia senticulosa 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
197	SCL# 16202	Ptilota asplenioides 001.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
198	*in situ*	Ptilota asplenioides 002.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
199	SCL# 16137	Ptilota serrata 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
200	SCL# 16220	Ptilota serrata 002.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
201	ML-SS #0036	Ptilota serrata 003.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
202	ML-SS #0037	Ptilota serrata 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
203	ML-SS #0038	Ptilota serrata 005.jpg	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
204	*in situ*	Ptilota serrata 006.jpg	Sutwik Island	AKP16_007	05/08/16	N56.57624 W157.23144
205	*in situ*	Ptilota serrata 007.jpg	Sutwik Island	AKP16_008	05/09/16	N56.57650 W157.23237
206	*in situ*	Pyropia 001.jpg	North of Takli Is., Russian Anchorage	AKP16_011	05/12/16	N58.07936 W154.46570
207	*in situ*	Pyropia 002.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
208	*in situ*	Pyropia 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
209	*in situ*	Pyropia 004.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
210	*in situ*	Pyropia 005.jpg	Port Wrangell	AKP16_009	05/10/16	N57.04739 W156.60646
211	*in situ*	Pyropia 006.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
212	*in situ*	Pyropia 007.JPG	Mitrofania Bay	AKP16_012	05/20/16	N55.97478 W158.74128
213	SCL# 16088	Pyropia abbottiae 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
214	SCL# 16249	Pyropia abbottiae 002.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
215	SCL# 16259	Pyropia abbottiae 003.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
216	ML-SS #0074	Pyropia abbottiae 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
217	ML-SS #0075	Pyropia abbottiae 005.jpg	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
218	ML-SS #0075	Pyropia fallax 001.jpg	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
219	SCL# 16058	Pyropia fallax 002.jpg	Mitrofania Bay	AKP16_012	05/20/18	N55.97508 W158.73828
220	SCL# 16069	Pyropia fallax 003.jpg	Mitrofania Bay	AKP16_012	05/20/18	N55.97508 W158.73828
221	SCL# 16079	Pyropia fucicola 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
222	SCL# 16100	Pyropia fucicola 002.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
223	*in situ*	Pyropia fucicola 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
224	SCL# 16084	Pyropia kurogii 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
225	SCL# 16093	Pyropia kurogii 002.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
226	SCL# 16241	Pyropia kurogii 003.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
227	ML-SS #0072	Pyropia kurogii 004.jpg	Derickson Is., Chiginigak Bay	AKP16_027	05/26/16	N56.99164 W156.72442
228	SCL# 16266	Pyropia nereocystis 001.JPG	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
229	SCL# 16138	Pyropia pseudolanceolata 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
230	SCL# 16205	Pyropia pseudolanceolata 002.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
231	ML-SS #0073-1	Pyropia pseudolanceolata 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
232	*in situ*	Pyropia pseudolanceolata 004.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
233	*in situ*	Pyropia pseudolanceolata 005.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
234	*in situ*	Pyropia pseudolanceolata 006.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
235	*in situ*	Pyropia pseudolanceolata 007.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
236	SCL# 16085	Pyropia taeniata 001.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
237	*in situ*	Pyropia taeniata 002.jpg	Islet north of Slaughter Is., Wide Bay	AKP16_001	05/04/16	N57.34386 W156.30667
238	SCL# 16143	Pyropia torta 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
239	SCL# 16257	Pyropia torta 002.JPG	Garden Is., Aniakchak Bay	AKP16_023	05/25/16	N56.75131 W157.36417
240	ML-SS #0073-2	Pyropia torta 003.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
241	*in situ*	Pyropia torta 004.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
242	SCL# 16154	Pyropia unabbottiae 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
243	SCL# 16185	Pyropia unabbottiae 002.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
244	SCL# 16153	Pyropia unabbottiae 003.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
245	SCL# 16144	Rhodochorton purpureum 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
246	SCL# 16158	Salishia firma 001.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
247	SCL# 16243	Scagelia occidentale 001.JPG	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
248	SCL# 16244	Scagelia occidentale 002.JPG	Kujulik Bay	AKP16_022	05/23/16	N56.56994 W157.89736
249	SCL# 16149	Schizymenia pacifica 001.JPG	Castle Bay	AKP16_017	05/22/16	N56.26083 W158.24167
250	SCL# 16162	Schizymenia pacifica 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
251	ML-SS #0080	Schizymenia pacifica 003.jpg	Choweit Island., Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
252	*in situ*	Schizymenia pacifica 004.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
253	*in situ*	Schizymenia pacifica 005.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
254	*in situ*	Schizymenia pacifica 006.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
255	SCL# 16227-1	Sparlingia pertusa 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
256	SCL# 16227-2	Sparlingia pertusa 002.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
257	ML-SS #0098	Sparlingia pertusa 003.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
258	ML-SS #0086	Sparlingia pertusa 004.jpg	Nakalilok Bay	AKP16_004	05/07/16	N56.92119 W156.93664
259	ML-SS #0087	Sparlingia pertusa 005.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
260	ML-SS #0088	Sparlingia pertusa 006.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
261	ML-SS #0089	Sparlingia pertusa 007.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
262	ML-SS #0090	Sparlingia pertusa 008.jpg	Garden Is., Aniakchak Bay	AKP16_024	05/25/16	N56.75000 W157.36094
263	SCL# 16103	Tokidadendron bullatum 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
264	SCL# 16171	Tokidadendron bullatum 002.JPG	Castle Bay	AKP16_018	05/22/16	N56.23346 W158.31236
265	SCL# 16195	Tokidadendron bullatum 003.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
266	SCL# 16213	Tokidadendron bullatum 004.JPG	Eagle Rock, Anchorage Bay, Chignik Bay	AKP16_020	05/23/16	N56.32758 W158.39378
267	ML-SS #0093	Tokidadendron bullatum 005.jpg	Slaughter Is., Wide Bay	AKP16_002	05/06/16	N57.33322 W156.33558
268	ML-SS #0094	Tokidadendron bullatum 006.jpg	Kujulik Bay	AKP16_022	05/24/16	N56.56994 W157.89736
269	*in situ*	Tokidadendron bullatum 007.jpg	Choweit Island, Semidi Islands	AKP16_006	05/08/16	N56.03626 W156.73961
270	SCL# 16231	Turnerella mertensiana 001.JPG	Kujulik Bay	AKP16_021	05/24/16	N56.64483 W157.85397
271	SCL# 16101	Wildemania cuneiformis 001.JPG	Portage Bay, Kuiutka Bay	AKP16_014	05/21/16	N56.17456 W158.53375
272	SCL# 16107	Wildemania cuneiformis 002.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953
273	SCL# 16083	Wildemania cuneiformis 003.JPG	Mitrofania Bay	AKP16_013	05/20/16	N55.97508 W158.73828
274	*in situ*	Wildemania cuneiformis 004.JPG	Portage Bay, Kuiutka Bay	AKP16_015	05/21/16	N56.17856 W158.51953

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
275	*in situ*	Wildemania cuneiformis 005.JPG	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
276	SCL# 16284	Wildemania variegata 002.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
277	ML-SS #0096	Wildemania variegata 003.jpg	Chiginigak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
278	*in situ*	Wildemania variegata 004.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814

Table B-4. -- Phylum Anthophyta (Seagrasses) – List of voucher specimens and in situ photographs from the Alaska Peninsula, May 2016 found in the benthic marine algae digital catalog (Appendix C).

	Voucher #	Identification/Filename	Location	Shore Station	Date	Latitude Longitude
1	SCL# 16193	Phyllospadix serrulatus 001.JPG	Anchorage Bay, Chignik Bay	AKP16_019	05/23/16	N56.32022 W158.35014
2	*in situ*	Phyllospadix serrulatus 002.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
3	*in situ*	Phyllospadix serrulatus 003.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
4	*in situ*	Phyllospadix serrulatus 004.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
5	*in situ*	Phyllospadix serrulatus 005.jpg	Nakalilok Bay	AKP16_003	05/07/16	N56.92094 W156.93511
6	*in situ*	Phyllospadix serrulatus 006.jpg	Sutwik Island	AKP16_007	05/08/16	N56.57624 W157.23144
7	*in situ*	Phyllospadix serrulatus 007.jpg	Sutwik Island	AKP16_007	05/08/16	N56.57624 W157.23144
8	*in situ*	Phyllospadix serrulatus 008.jpg	Sutwik Island	AKP16_007	05/08/16	N56.57624 W157.23144
9	*in situ*	Phyllospadix serrulatus 009.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
10	*in situ*	Phyllospadix serrulatus 010.JPG	Chiginagak Bay	AKP16_025	05/26/16	N56.96631 W156.78814
11	SCL# 16130-1	Zostera marina 001.JPG	Portage Bay, Kuiukta Bay	AKP16_016	05/21/16	N56.18575 W158.46142
12	SCL# 16130-2	Zostera marina 002.JPG	Portage Bay, Kuiukta Bay	AKP16_016	05/21/16	N56.18575 W158.46142
13	ML-SS #0097	Zostera marina 003.jpg	Mink Is., E. of Takli Is., Amalik Bay	AKP16_028	05/27/16	N58.05822 W154.43911
14	*in situ*	Zostera marina 004.JPG	Portage Bay, Kuiukta Bay	AKP16_016	05/21/16	N56.18575 W158.46142

Digital Catalog of
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Digital Catalog of
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from the Alaska Peninsula

Green Seaweeds
Chlorophyta

May 2016

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia sp 001
Alaria bioband; SCL# 16052; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia arcta 002
rockweed bioband; SCL# 16053; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia arcta 003
lower mid intertidal, red algae bioband; SCL# 16109; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia arcta 004
lower mid intertidal, red algae bioband; SCL# 16152; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia arcta 005
low intertidal, bleached red algae bioband; SCL# 16238; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia arcta 006
dark brown kelp bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia arcta 007
Winter Laver bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia coalita 001
lower mid intertidal, boulder/cobble; SCL# 16280; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia coalita 002
Alaria bioband; SCL# 16047; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia coalita 003
mid intertidal; green algae bioband; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia coalita 005
low intertidal; red algae bioband; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia duriuscula 001
lower intertidal, red algae bioband; SCL# 16097; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia duriuscula 002
mid to low intertidal, boulder on rock, red algae bioband; ML-SS #0001;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia duriuscula 003
mid intertidal; rockweed bioband; ;
North of Takli Island, Russian Anchorage, May 12, 2016; AKP16_011; N58.07936 W154.46570

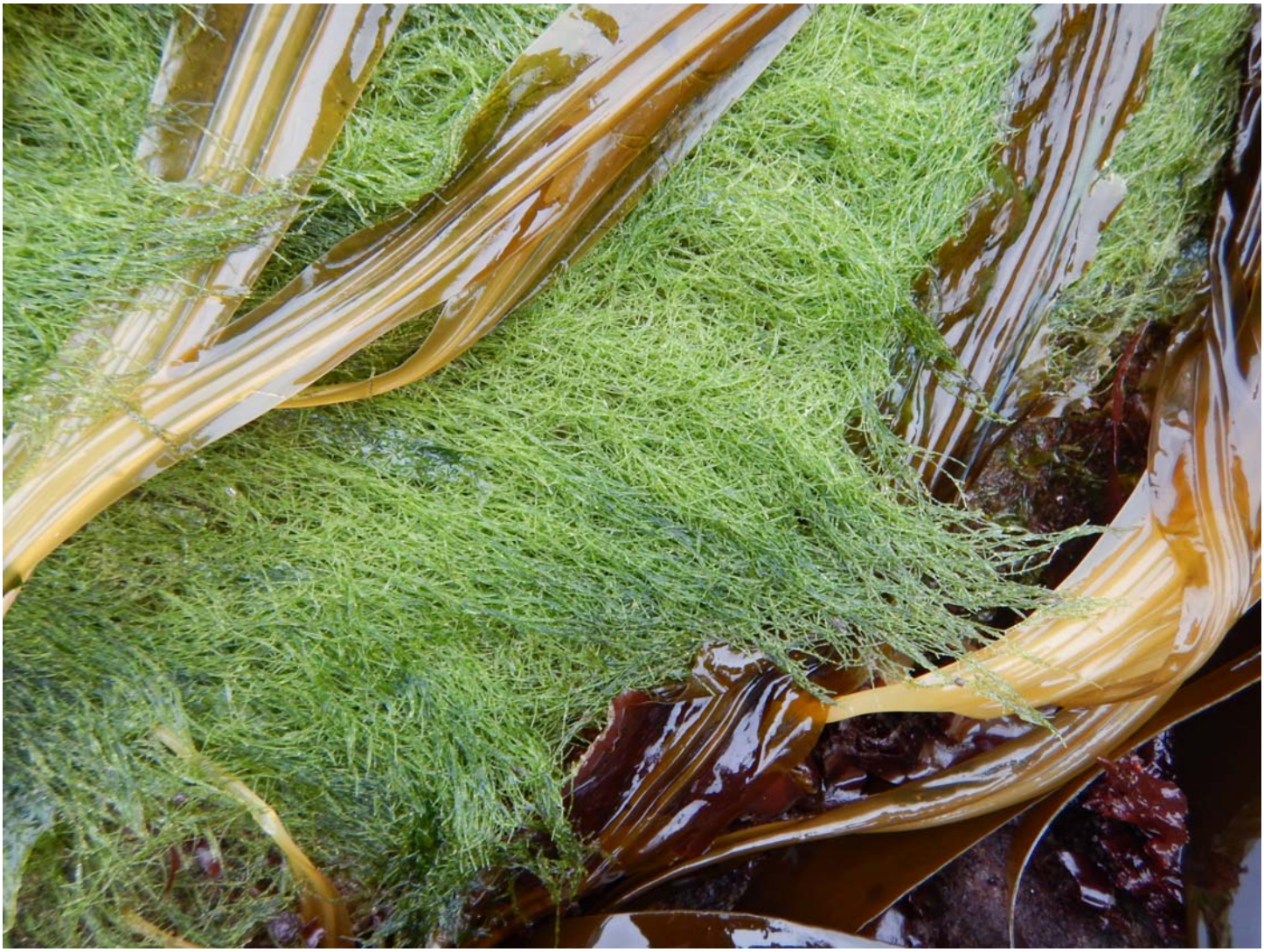
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia sonderi 001
low intertidal, rock in sand; SCL# 16140; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia sonderi 002
large cells are visible; mid intertidal; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Acrosiphonia sonderi 003
large cells are visible; mid intertidal; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia sonderi 004
large cells are visible; mid intertidal; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Acrosiphonia sonderi 005
large cells are visible; mid intertidal; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

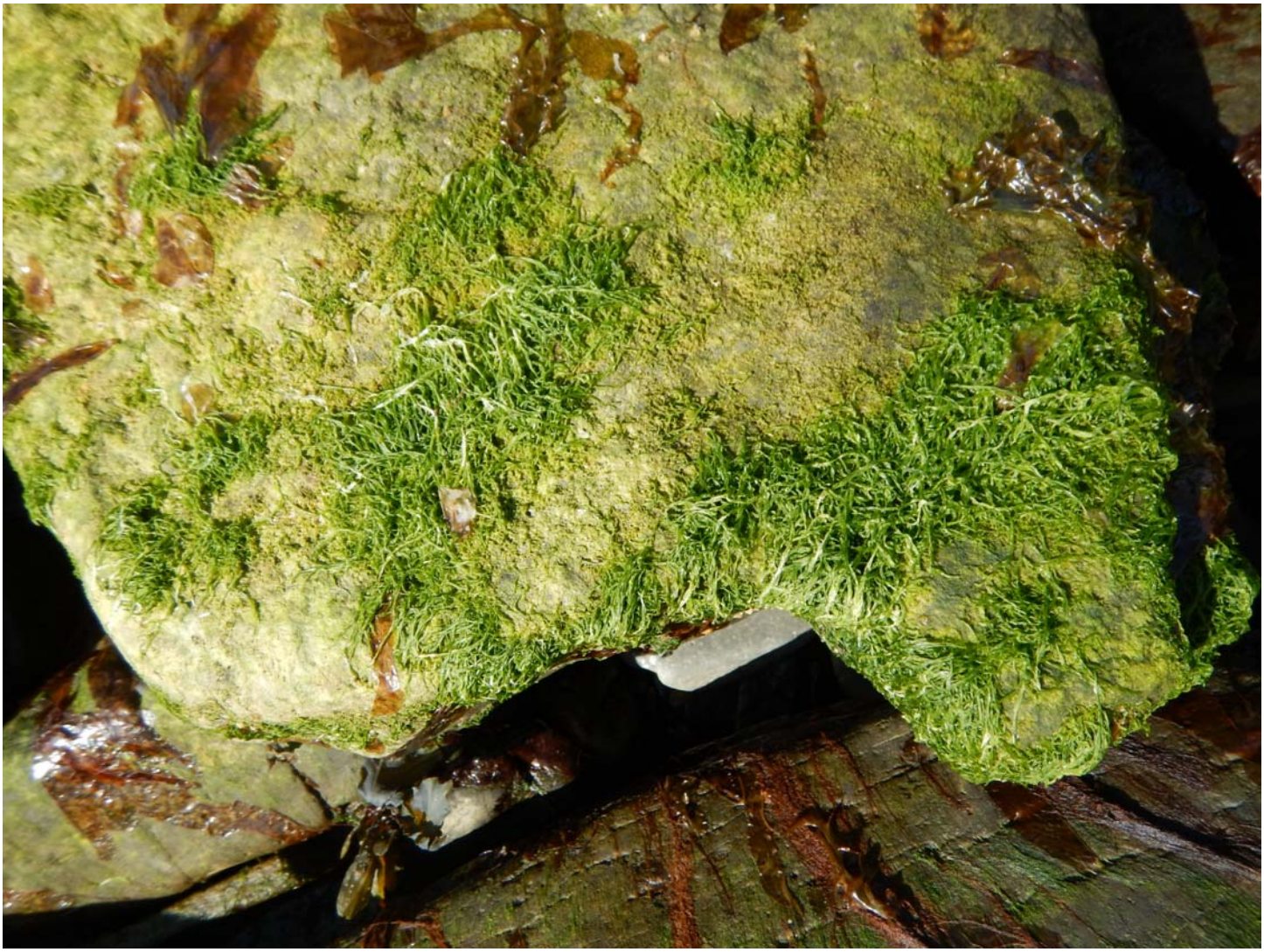
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Blidingia minima 001
upper intertidal; bare bioband; SCL# 16258; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

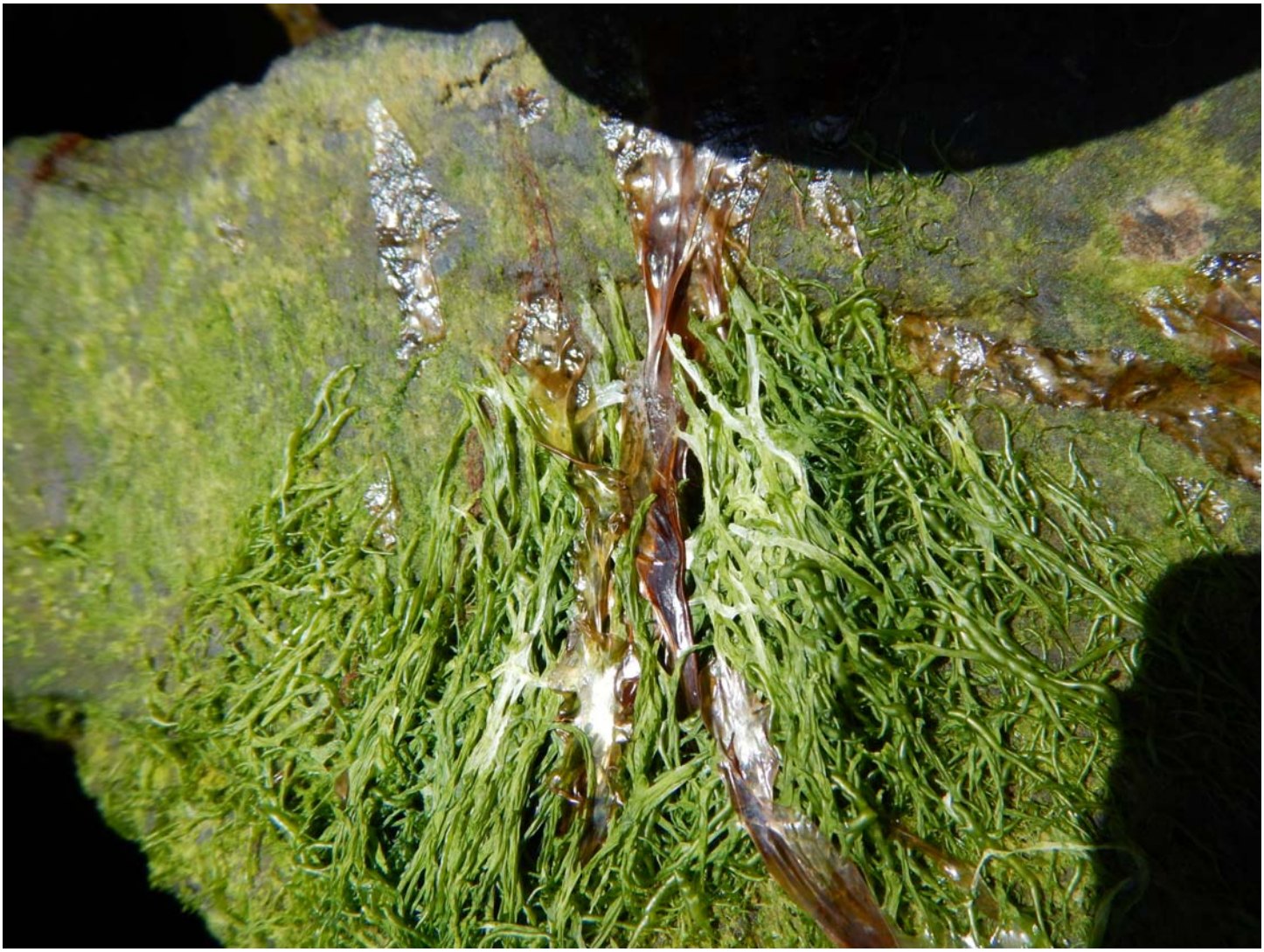
Blidingia minima 002
mid intertidal, boulder-cobble-sand; ML-SS #0067;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Blidingia minima 003
upper intertidal; green alage bioband; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Blidingia minima 004
upper intertidal; green alage bioband; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Chaetomorpha sp 001
high intertidal, on Ahnfeltia fastigiata; SCL# 16262; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cladophora sericea 001
mid intertidal; SCL# 16102; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Kornmannia leptoderma 001
on Phyllospadix serrulatus; SCL# 16283; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Kornmannia leptoderma 002
on Phyllospadix serrulatus; SCL# 16283-2; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Kornmannia leptoderma 003
epiphytic on Zostera marina; SCL# 16131; UBC Herbarium
Portage Bay, Kuiukta Bay, May 21, 2016; AKP16_016; N56.18575 W158.46142

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Monostroma grevillei 001
green algae bioband; SCL# 16082; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Monostroma grevillei 002
rockweed bioband; ;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Monostroma grevillei 003
red algae bioband; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pseudothrix borealis 001
mid intertidal; green algae bioband; SCL# 16078; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pseudothrix borealis 002
low intertidal, Alaria bioband; SCL# 16206; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pseudothrix borealis 003
mid intertidal; rockweed bioband; ;
North of Takli Island, Russian Anchorage, May 12, 2016; AKP16_011; N58.07936 W154.46570

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pseudothrix borealis 004
mid intertidal; rockweed bioband; ;
North of Takli Island, Russian Anchorage, May 12, 2016; AKP16_011; N58.07936 W154.46570

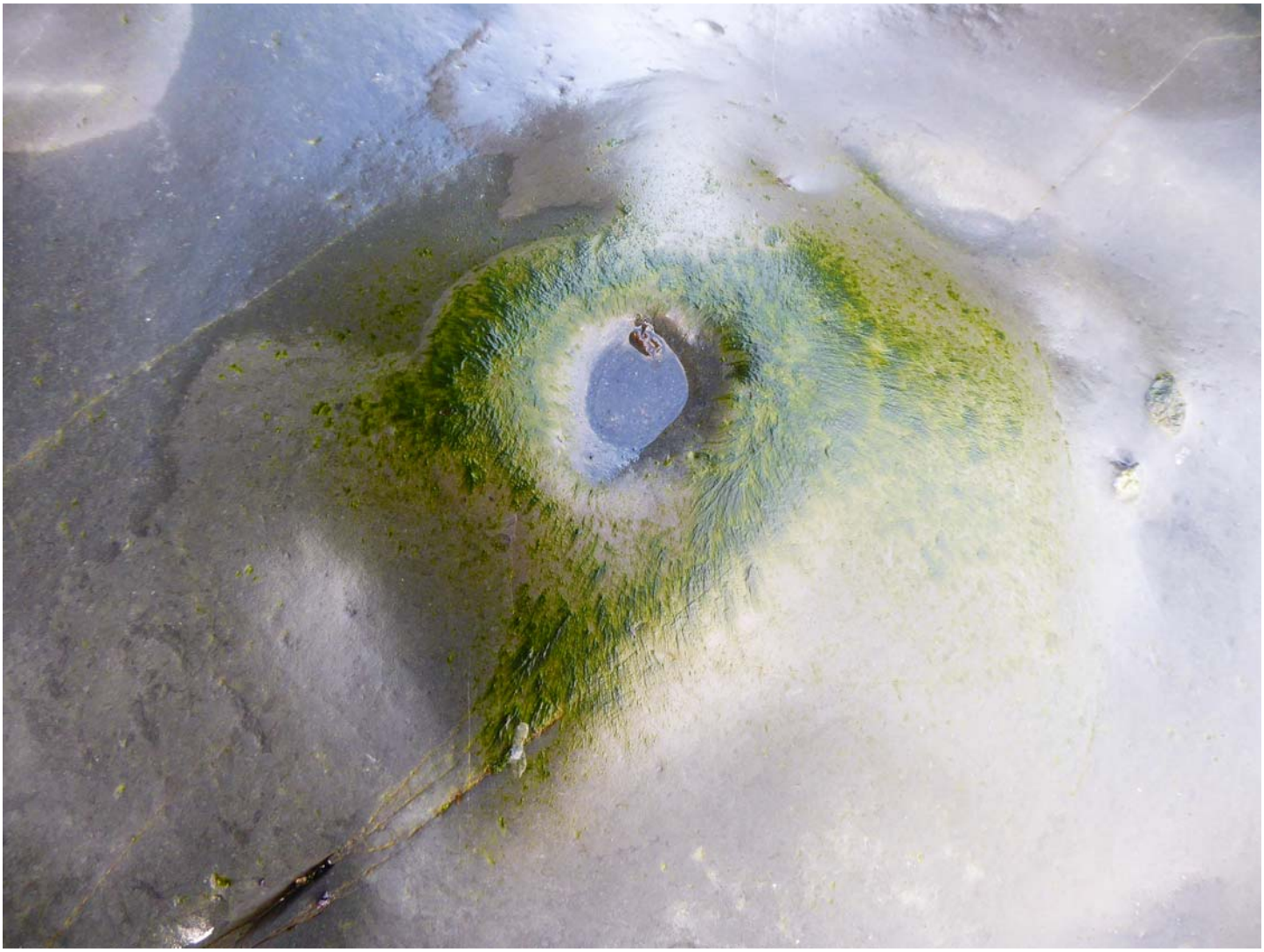
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Rosenvingiella polyrhiza 001
high intertidal; SCL# 16214; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Rosenvingiella polyrhiza 002
splash zone bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

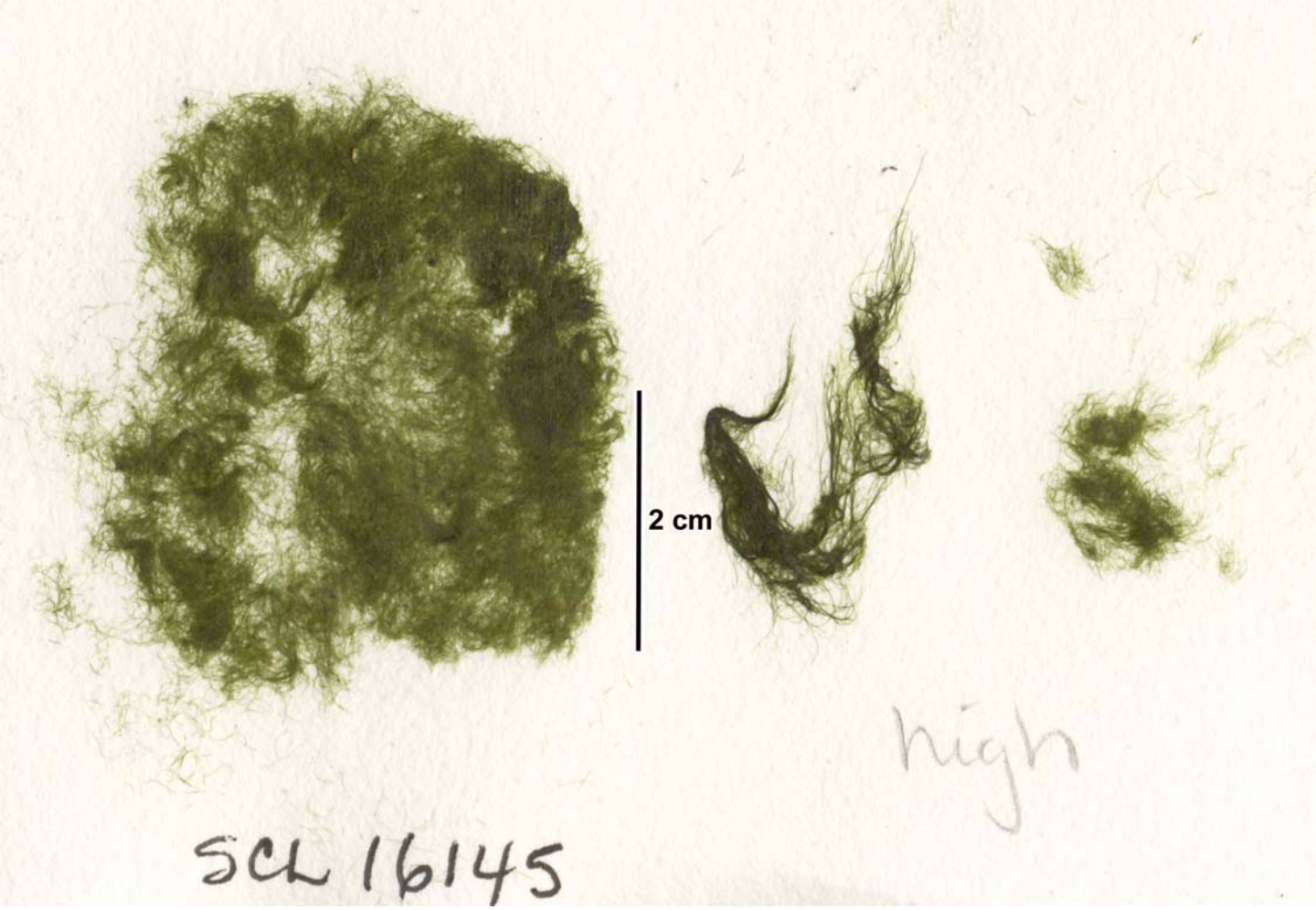


Rosenvingiella polyrhiza 003
splash zone bioband; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Rosenvingiella polyrhiza 004
high intertidal; bare bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Ulothrix flacca 001
high intertidal; SCL# 16145; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulothrix flacca 002
mid intertidal, cobble and boulder field; ;
North of Takli Island, Russian Anchorage, May 12, 2016; AKP16_011; N58.07936 W154.46570

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulothrix flacca 003
green algae bioband; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulothrix flacca 004
upper intertidal on boulder; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulothrix flacca 005
green algae bioband; ;
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulothrix flacca 006
greena algae bioband; ;
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

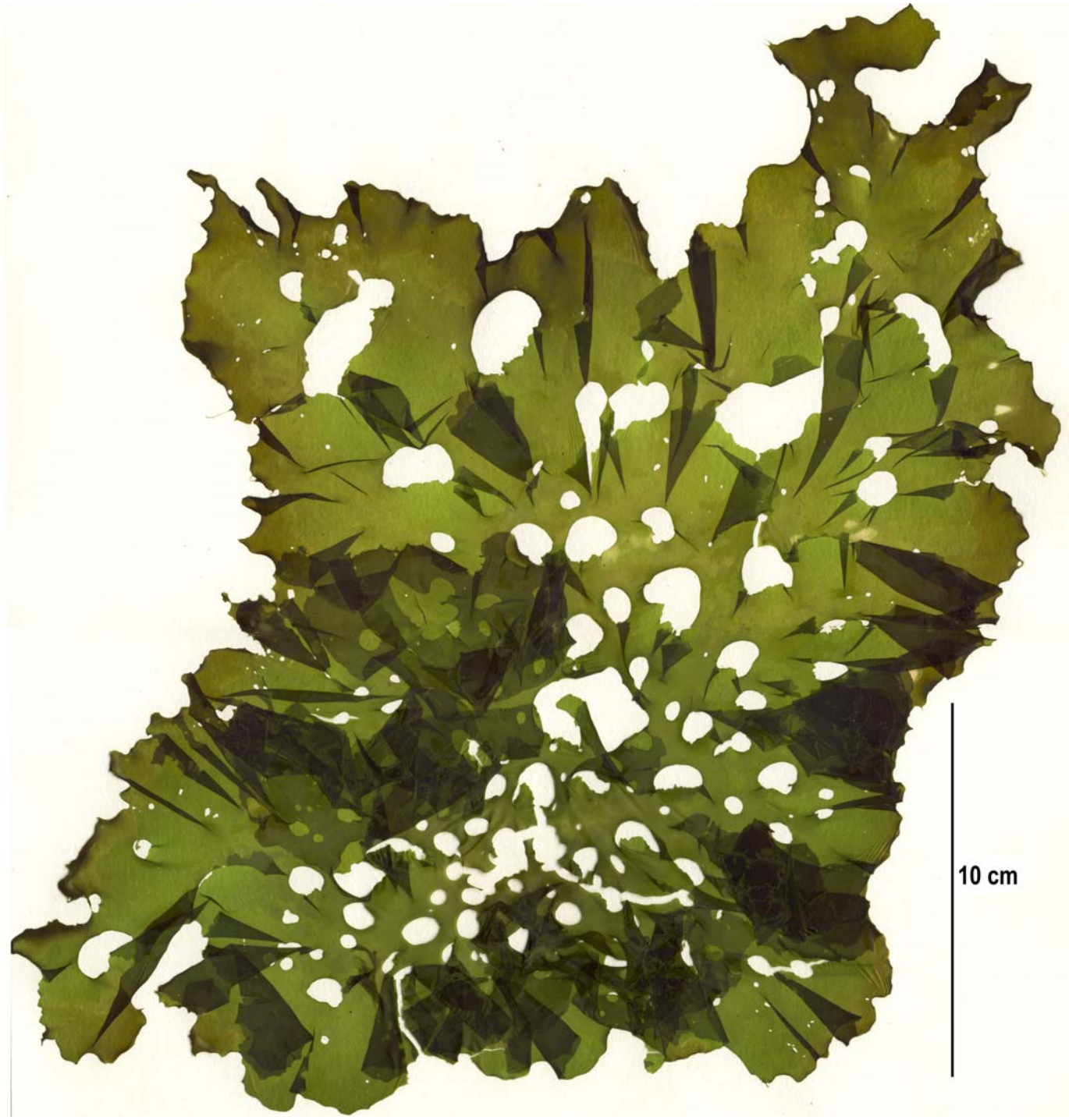
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulva lactuca 001
mid to low intertidal; SCL# 16161; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

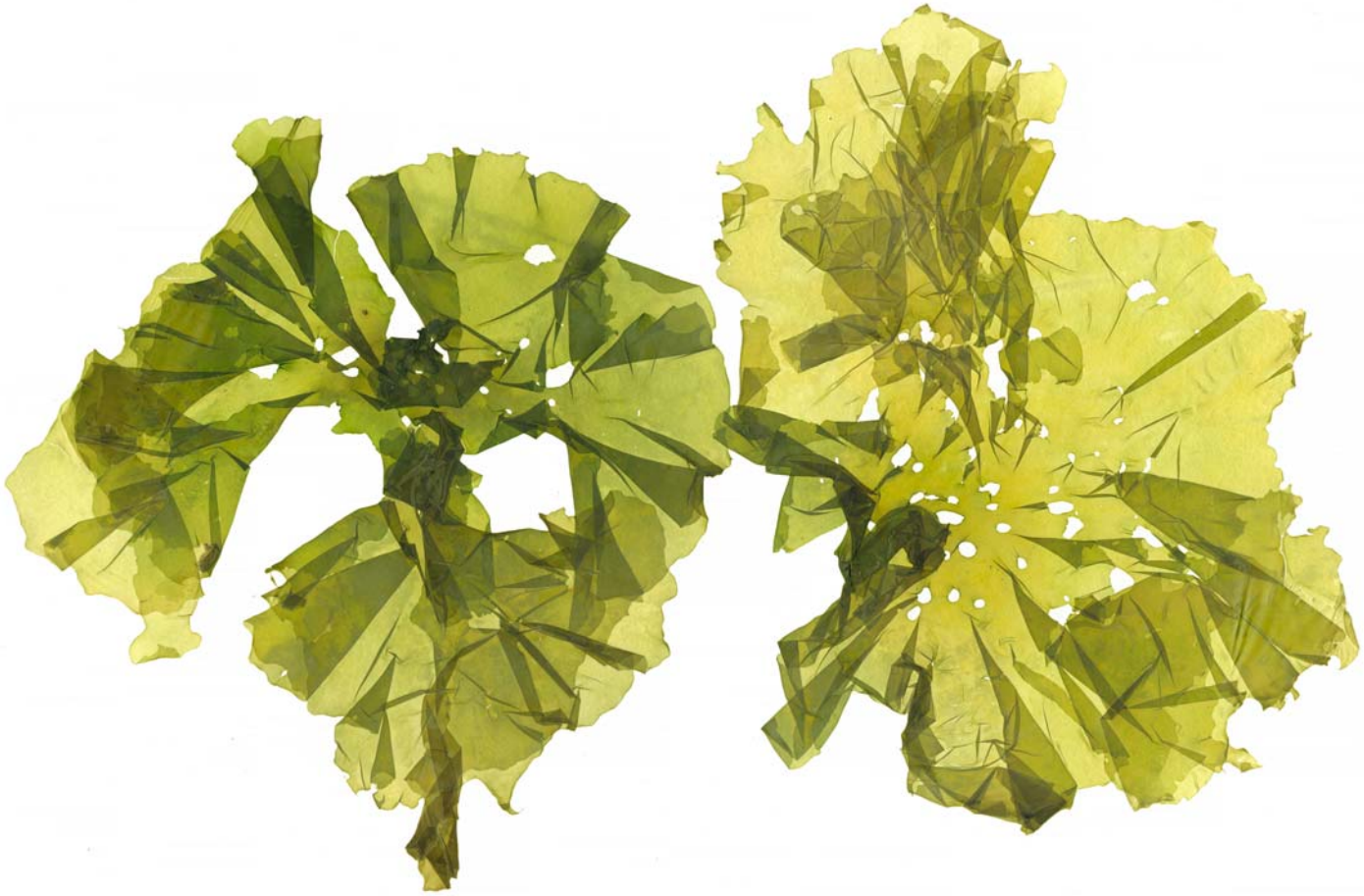
Ulva lactuca 002
lower intertidal, red algae bioband; SCL# 16092; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Ulva lactuca 003
on Phyllospadix serrulatus; SCL# 16281; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

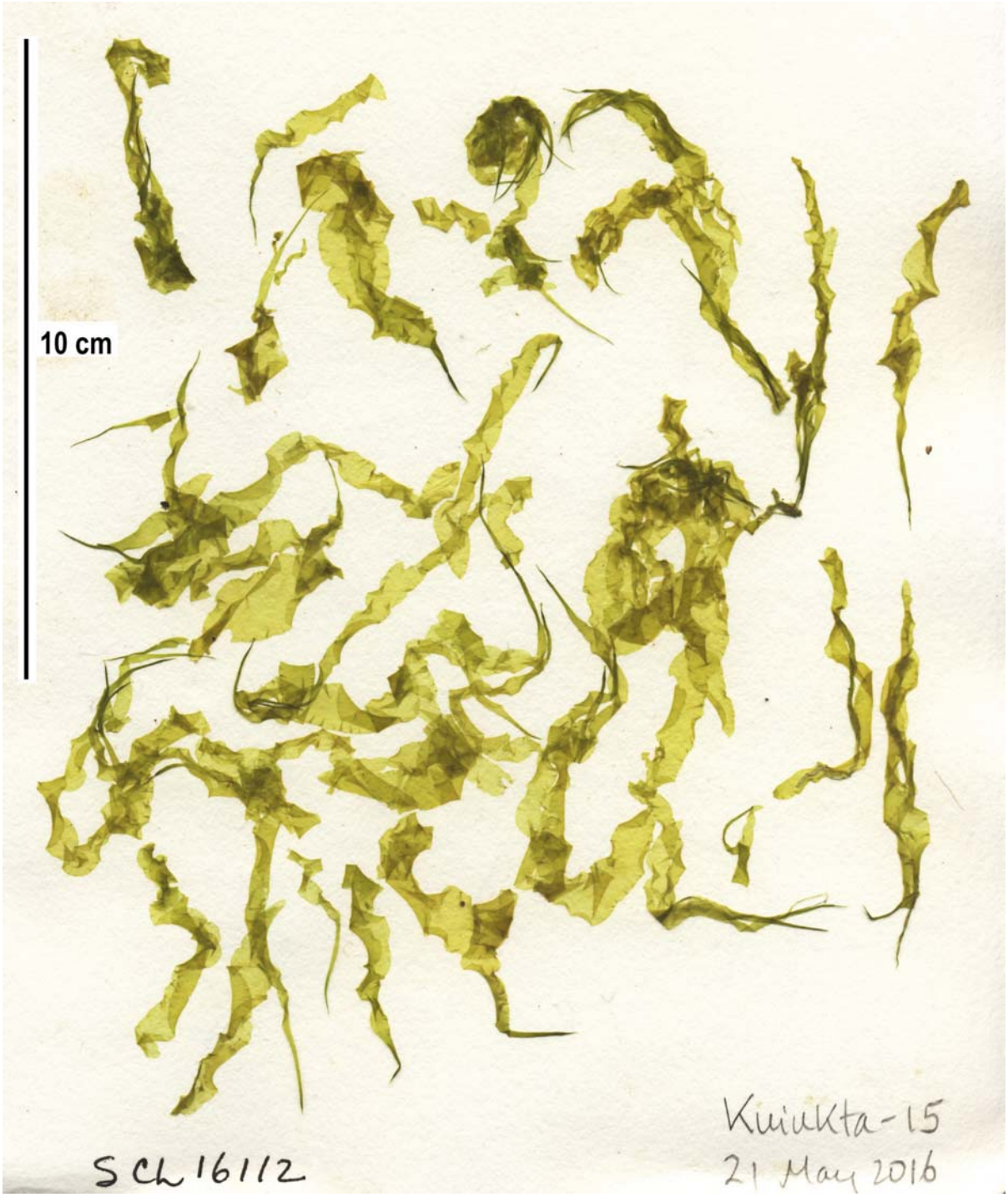


Ulva lactuca 004
mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0095;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulva lactuca 005
rockweed bioband; ;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Ulva linza 001
mid intertidal, rockweed bioband; UBC 16112; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

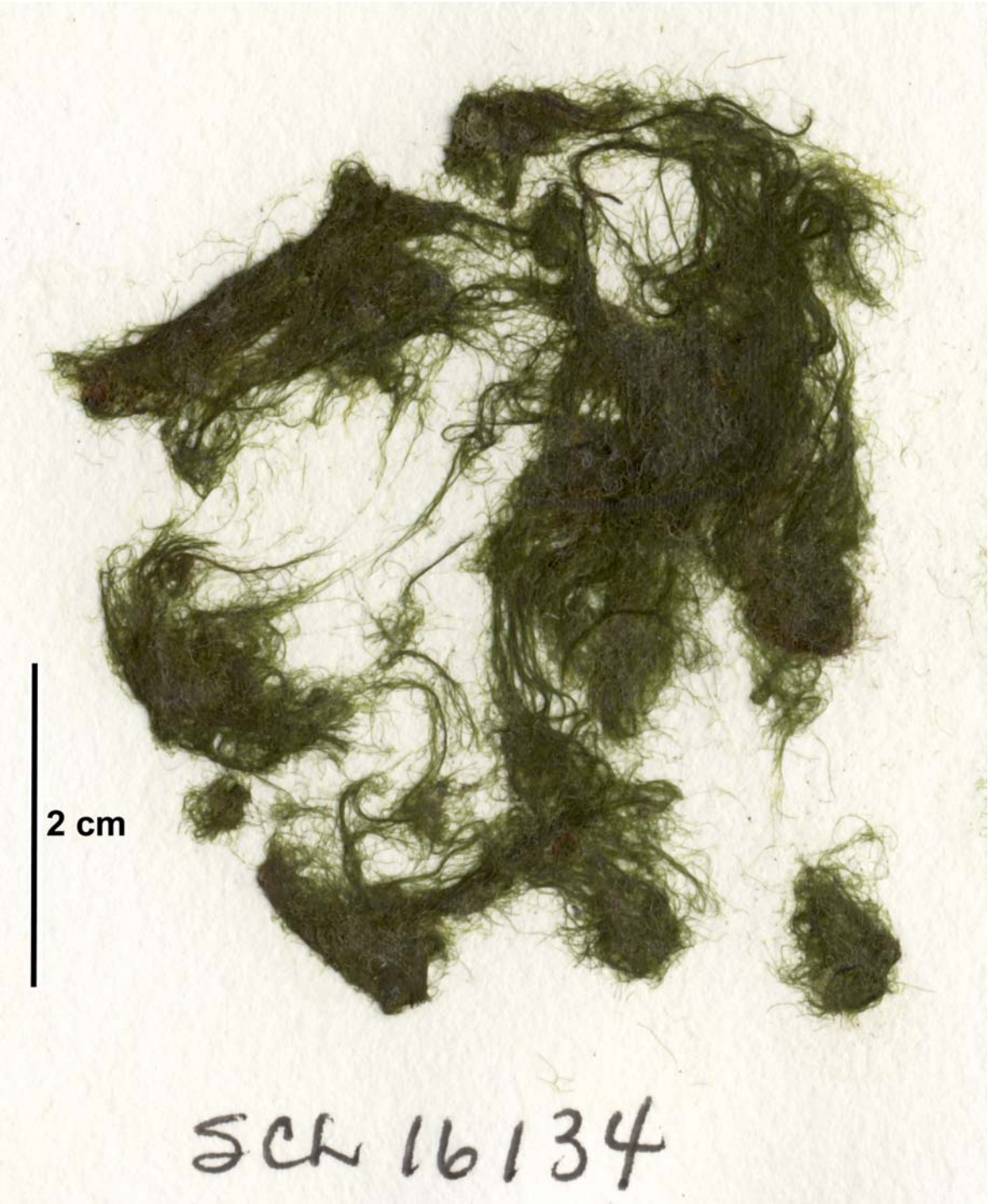
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ulva linza 002
rockweed bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

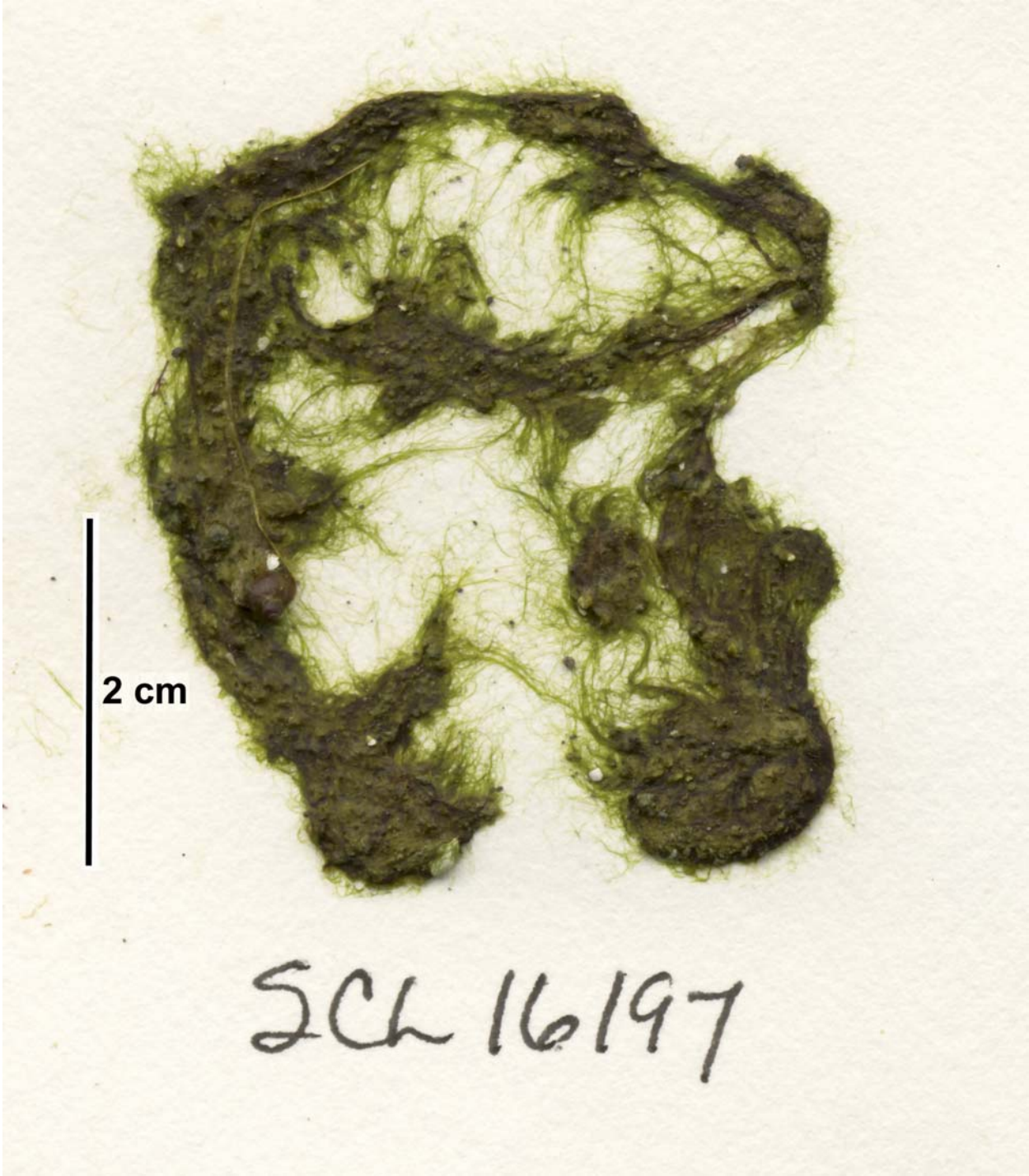
Ulvaria obscura var blyttii 001
low intertidal, rockweed and Alaria biobands; SCL# 16221; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



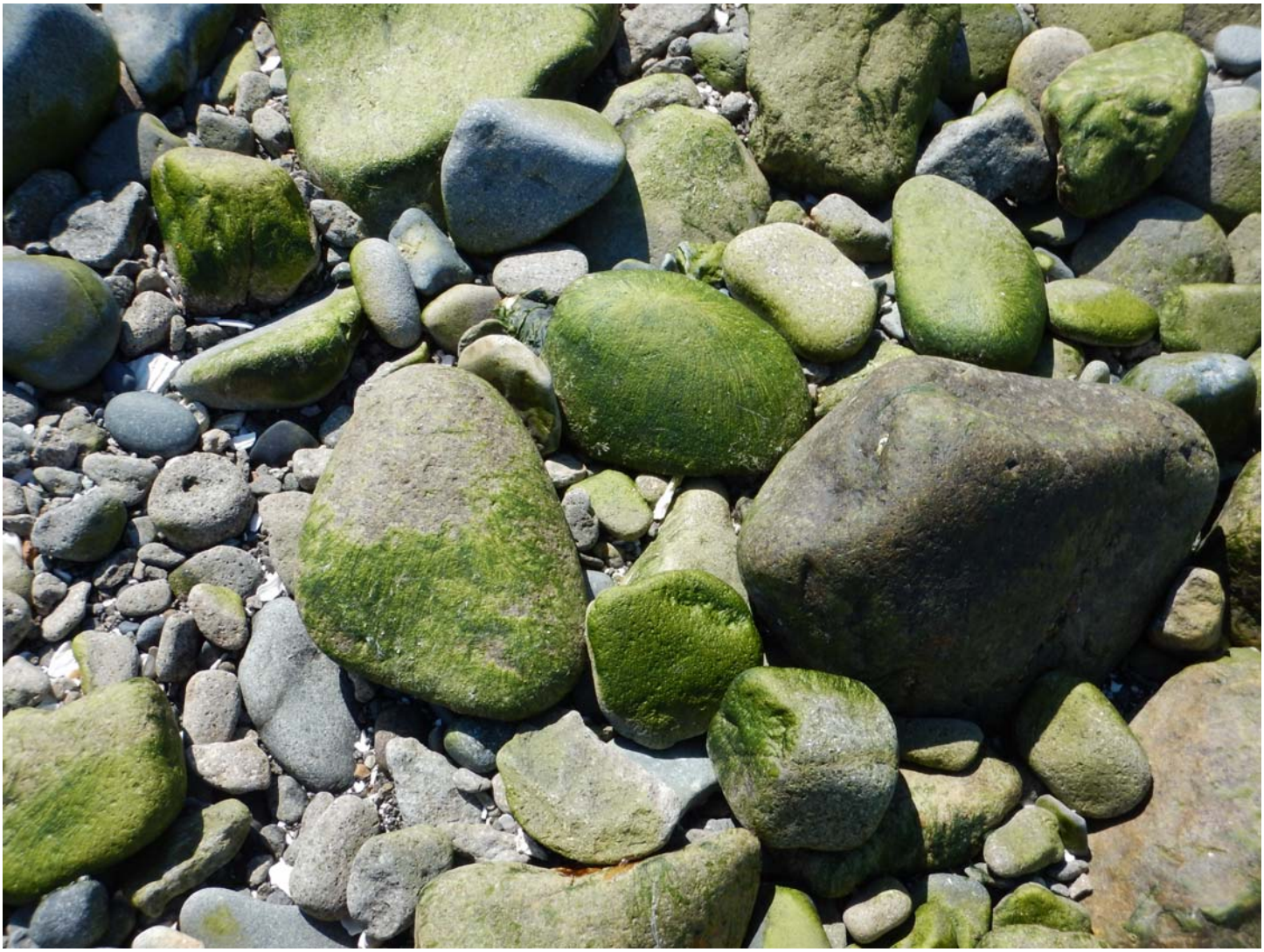
Urospora neglecta 001
high intertidal; SCL# 16134; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Urospora neglecta 002
high intertidal, green algae bioband, fertile; SCL# 16197; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Urospora neglecta 003
upper intertidal on boulder; ;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

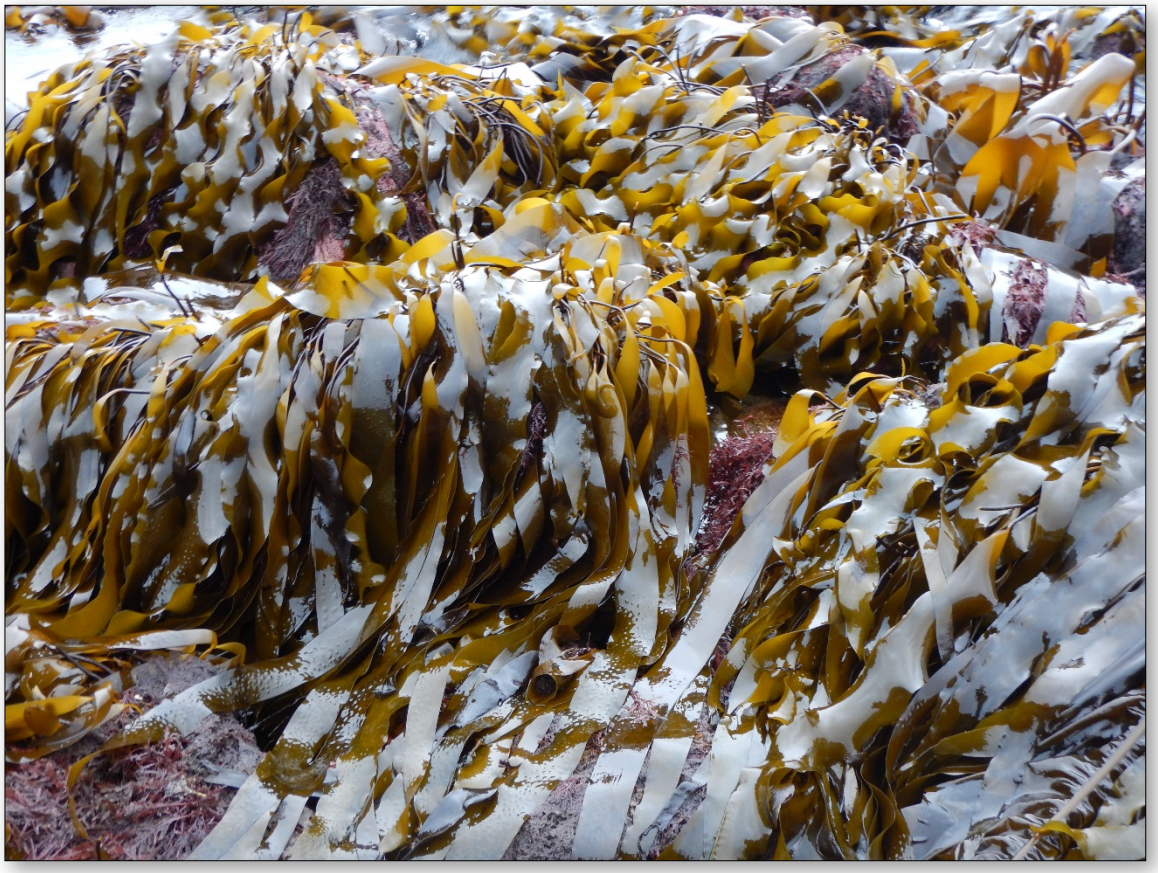
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Urospora neglecta 004
green algae bioband; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Digital Catalog of
Benthic Marine Algae
from the Alaska Peninsula

Brown Seaweeds
Ochrophyta



May 2016

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Agarum clathratum 001
low intertidal; SCL# 16219; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 001
low intertidal; SCL# 16229; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 002
blade only, low intertidal, large boulders on rock, Alaria bioband; ML-SS #0002;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 003
young, low intertidal, rock, Alaria bioband; ML-SS #0003;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 004
low intertidal, rock, Alaria bioband; ML-SS #0004;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 005
young, low intertidal, rock, Alaria bioband; ML-SS #0005;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 006
low intertidal, boulder on rock, Alaria bioband; ML-SS #0006-1;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 007
low intertidal, cobble-sand-boujlder, surfgrass bioband; ML-SS #0007;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 008
Alaria bioband; ;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 009
low intertidal; dark brown kelp bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 010
low intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 011
adult with sporophylls at base; low intertidal; red algae bioband; ;
Sutwik Island, May 8, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Alaria marginata 012
Alaria bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 001
lower intertidal, red algae bioband; SCL# 16089; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 002
lower mid intertidal, red algae bioband; SCL# 16168; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 003
mid to low intertidal, cobble/sand on rock, red algae bioband; ML-SS #0008;
Sutwik Island, May 9, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 004
mid to low intertidal, cobble/sand on rock, red algae bioband; ML-SS #0009;
Sutwik Island, May 9, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 005
mid intertidal, boulder on rock, rockweed bioband; ML-SS #0010;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 006
mid to low intertidal, cobble-sand-boulder; ML-SS #0011;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Analipus japonicus 007
red algae bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme bulligera 001
low intertida,l soft kelp brown bioband; SCL# 16123-1; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme bulligera 002
low intertidal, soft brown kelp bioband; SCL# 16123-2; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme bulligera 003
lower mid intertidal, red algae bioband; SCL# 16164; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

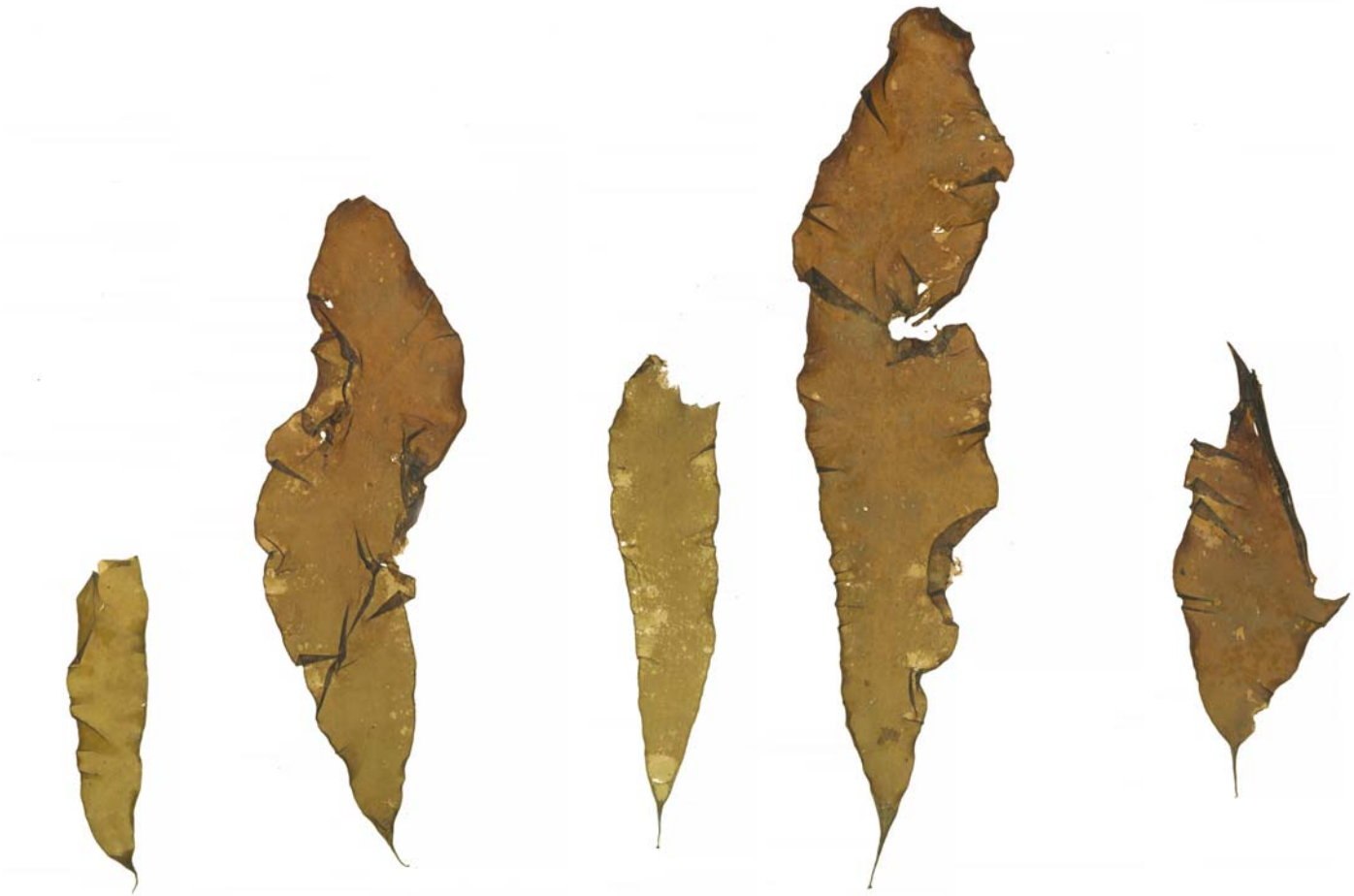
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme bulligera 004
lower mid intertidal, red algae bioband; SCL# 16271; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme bulligera 005
mid intertidal, cobble/boulder on rock, red bioband; ML-SS #0014;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Coilodesme bulligera 006
on Ralfsia funjiformis, in tidepool, mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0015; Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme californica 001
on Stephanocystis geminata; SCL# 16124; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

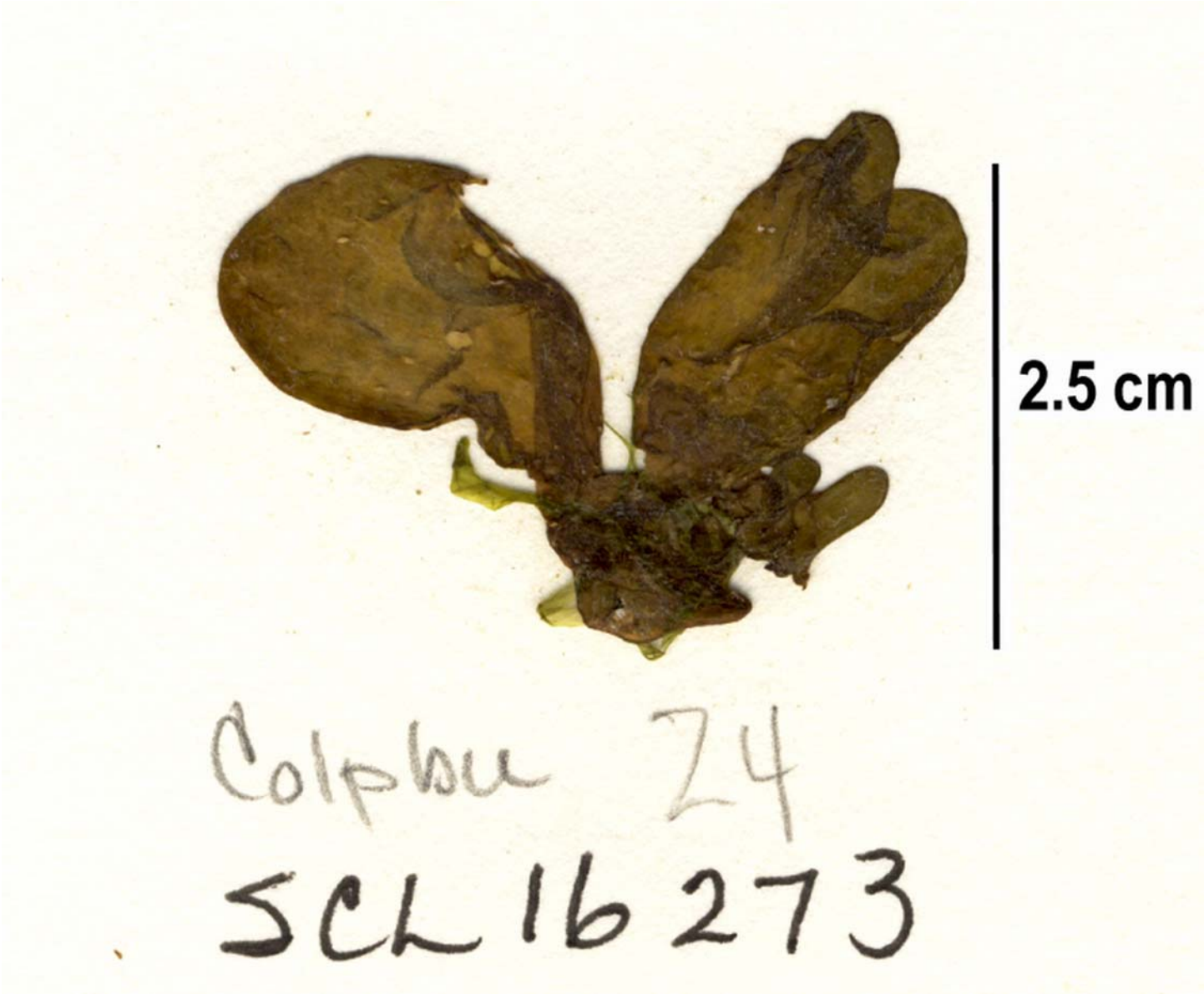
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme californica 002
on Stephanocystis geminata, low intertidal; SCL# 16159; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Coilodesme californica 003
on Stephanocystis geminata, low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0016; Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Colpomenia bullosa 001
lower mid intertidal, red algae bioband; SCL# 16273; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Colpomenia bullosa 002
mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0017;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Colpomenia peregrina 001
on Fucus distichus, boulder-cobble-sand, rockweed bioband; ML-SS #0018;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Costaria costata 001
very low intertidal; dark brown kelp bioband; SCL# 16225; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Costaria costata 002
young, low intertidal, rock, dark brown kelp bioband; ML-SS #0019;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Costaria costata 003
very low intertidal; dark brown kelp bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Costaria costata 004
very low intertidal; dark brown kelp bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cymathaere triplicata 001
young, low intertidal, rock, dark brown kelp bioband; ML-SS #0022;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cymathaere triplicata 002
younger specimens; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cymathaere triplicata 003
younger specimens; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

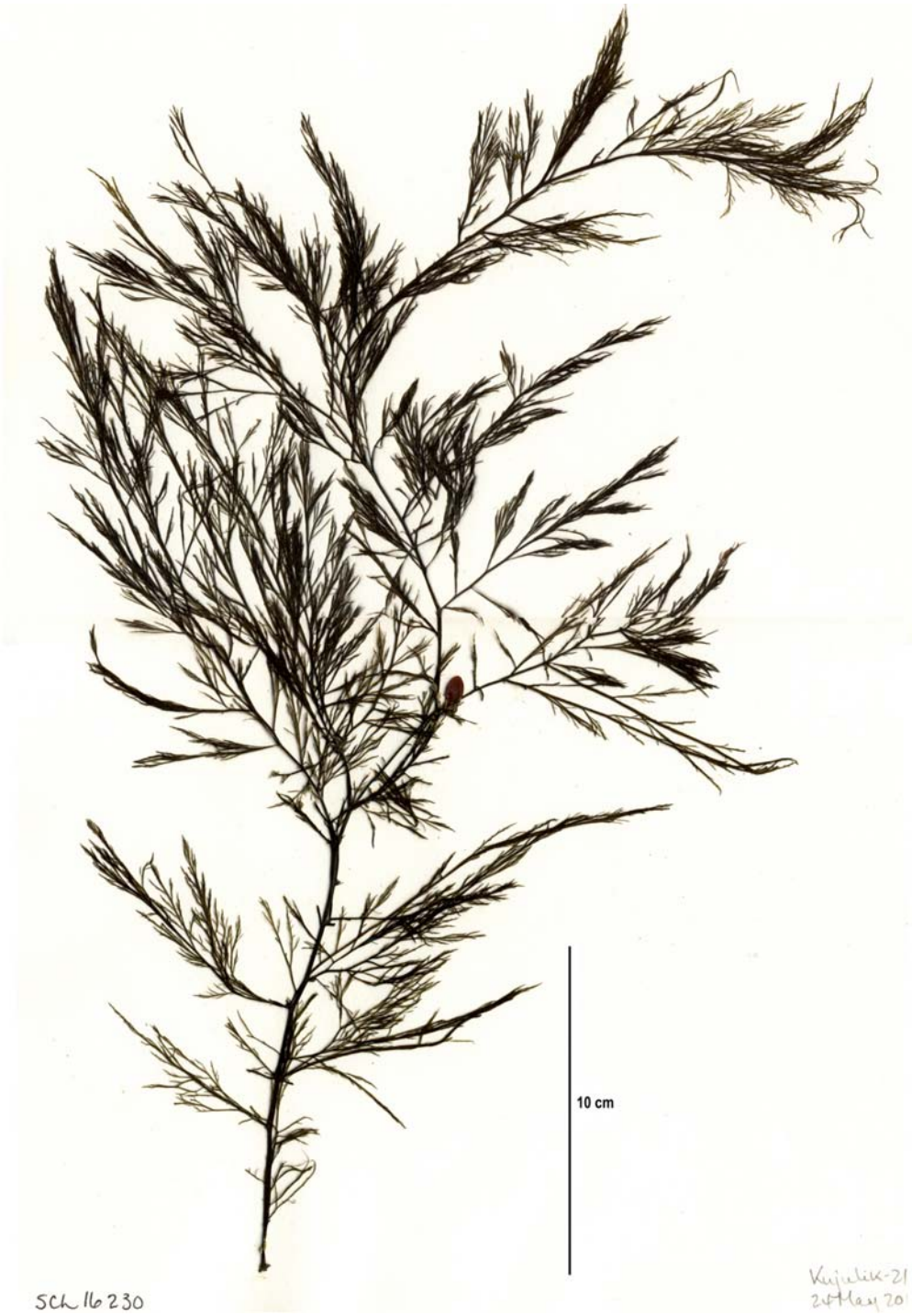
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cymathaere triplicata 004
adult specimens; low intertidal; dark brown kelp bioband; ;
Choweit Is., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cymathaere triplicata 005
adult specimens; low intertidal; dark brown kelp bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

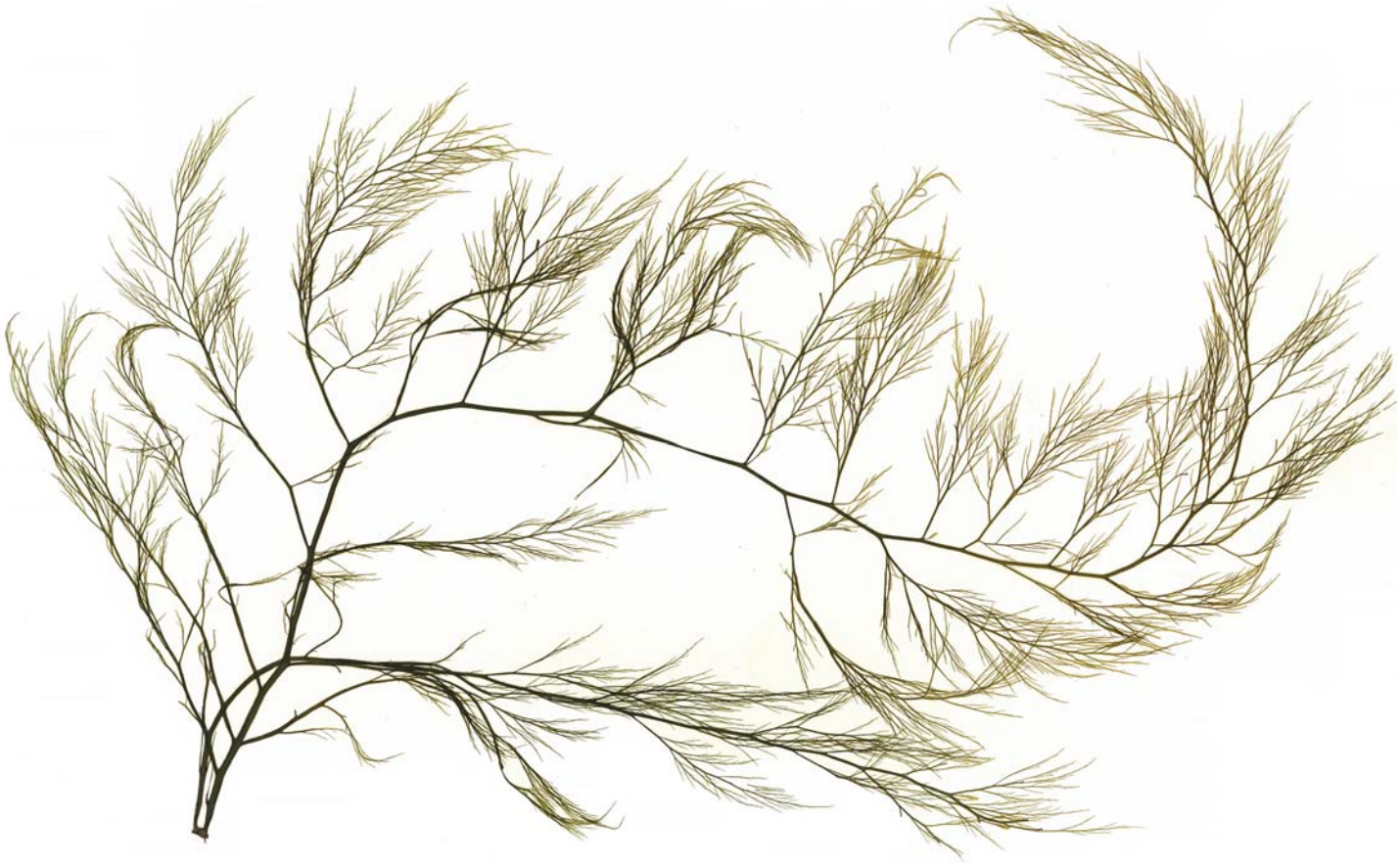


Desmarestia aculeata 001
low intertidal; SCL# 16230; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Desmarestia aculeata 002
low intertidal, bleached red bioband; SCL# 16234; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Desmarestia aculeata 003
early spring growth, low intertidal, rock, dark brown kelp bioband; ML-SS #0023;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Elachista fucicola 001
mid intertidal on Fucus; SCL# 16128; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Eualaria fistulosa 001
very low intertidal; dark brown kelp bioband; SCL# 16246; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

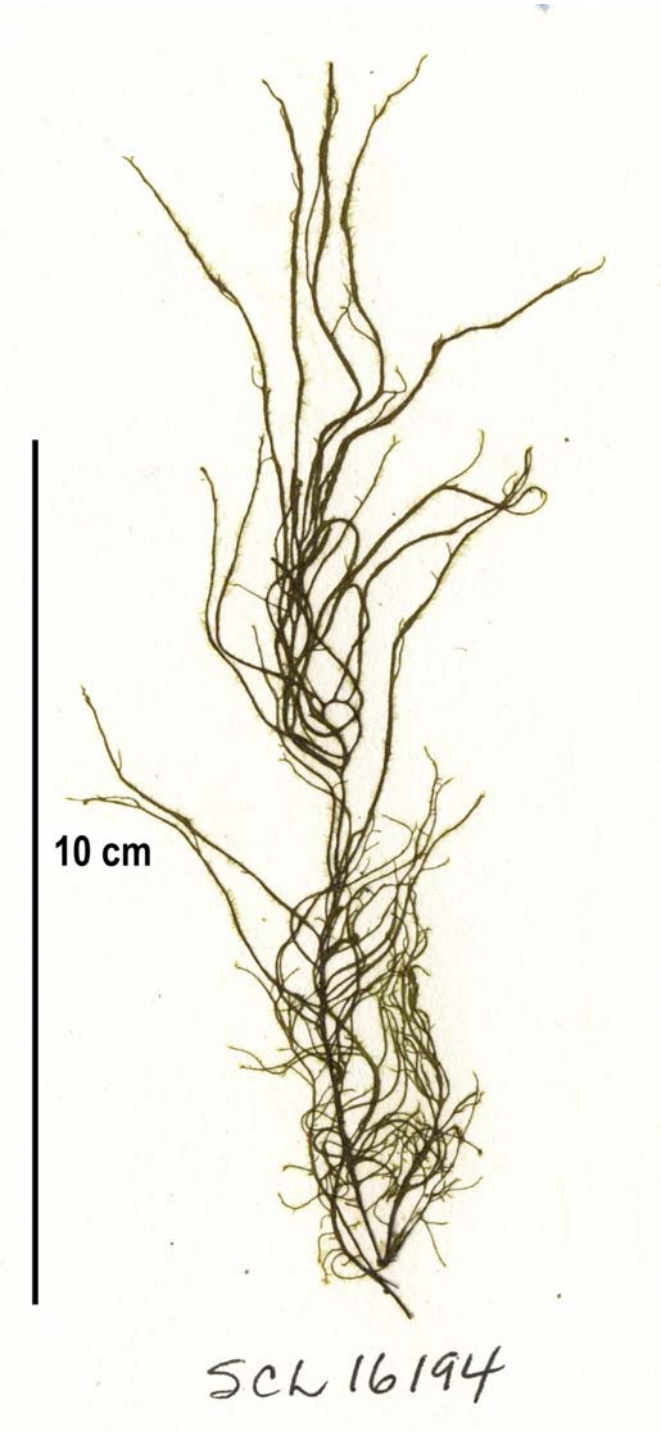
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Fucus distichus 001
non-fertile; ;
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Fucus distichus 002
non-fertile; ;
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Haplogloia andersonii 001
mid intertidal tidepool, bare bioband; SCL# 16194; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria longipes 001
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria longipes 002
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria longipes 003
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria longipes 004
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria setchelli 001
very low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria setchelli 002
very low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 001
low intertidal, cobble-sand-boulder, surfgrass bioband; ML-SS #0028-2;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

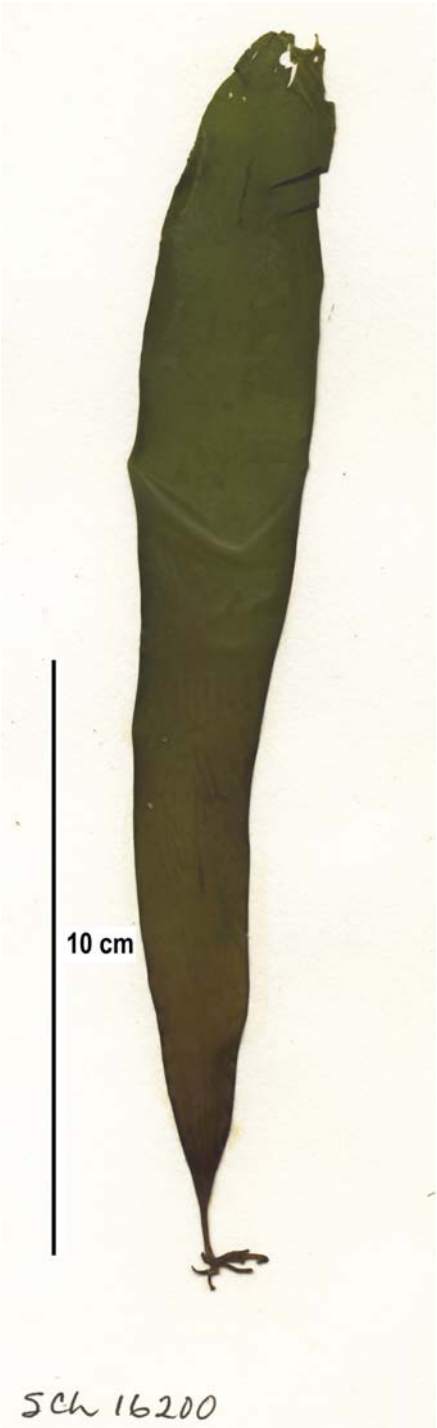
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 002
low intertidal, boulder on rock, dark brown kelp bioband; ML-SS #0006-2;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 003
low intertidal, rock, dark brown kelp bioband; ML-SS #0028-1;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

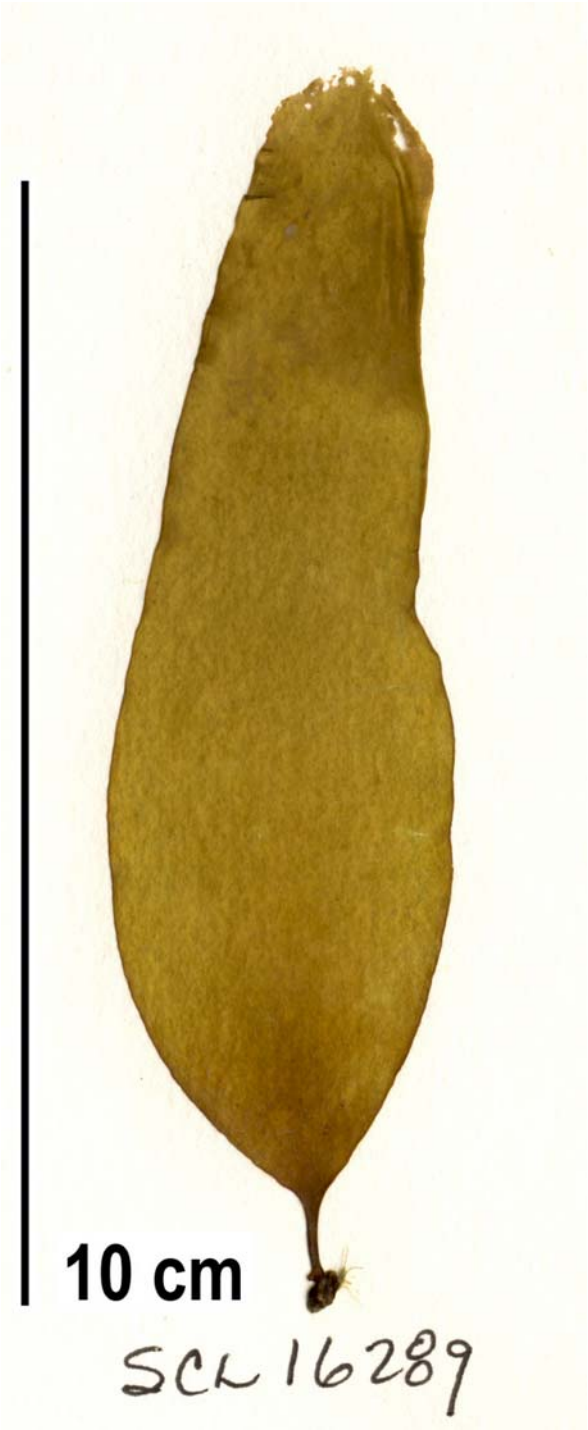


Laminaria sp nov 004
low intertidal, dark brown kelp bioband; SCL# 16200; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 005
low intertidal, rock with boulders, Alaria and urchin barrens biobands; ML-SS #0078;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Laminaria sp nov 006
low intertidal, Alaria bioband; SCL# 16289; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 008
low intertidal, dark brown kelp bioband; SCL# 16200-2; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 009
on cobble; SCL# 16201; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria sp nov 010
low intertidal; dark brown kelp bioband; ;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

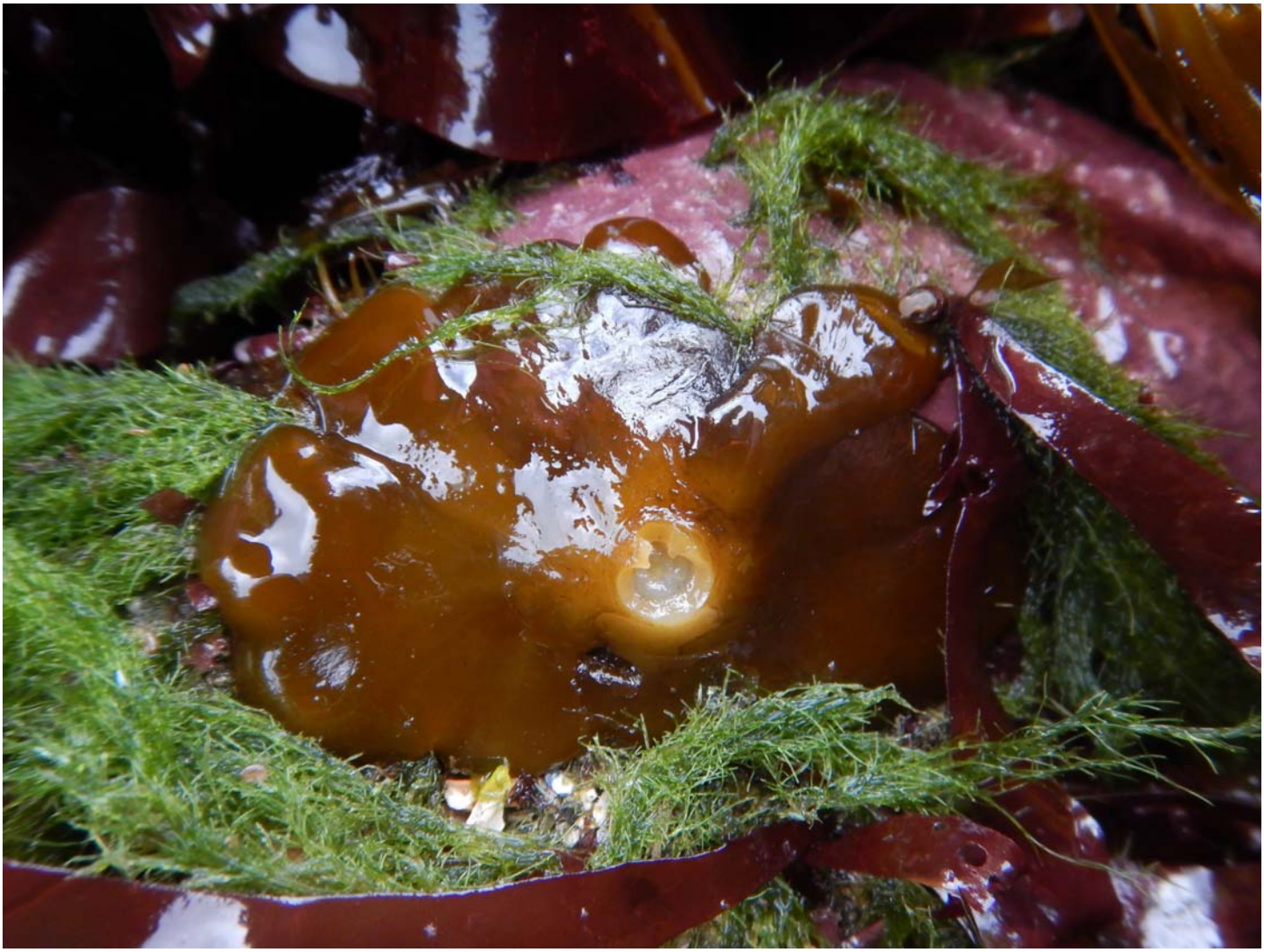
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria yezoensis 001
low intertidal, Alaria bioband; SCL# 16216; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Laminaria yezoensis 002
low intertidal, rock, dark brown kelp bioband; ML-SS #0028-2;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Laminaria yezoensis 003
holdfast only; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Leathesia marina 001
lower intertidal, red algae bioband; SCL# 16212; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Melanosiphon intestinalis 001
mid intertidal, rockweed bioband; SCL# 16104; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

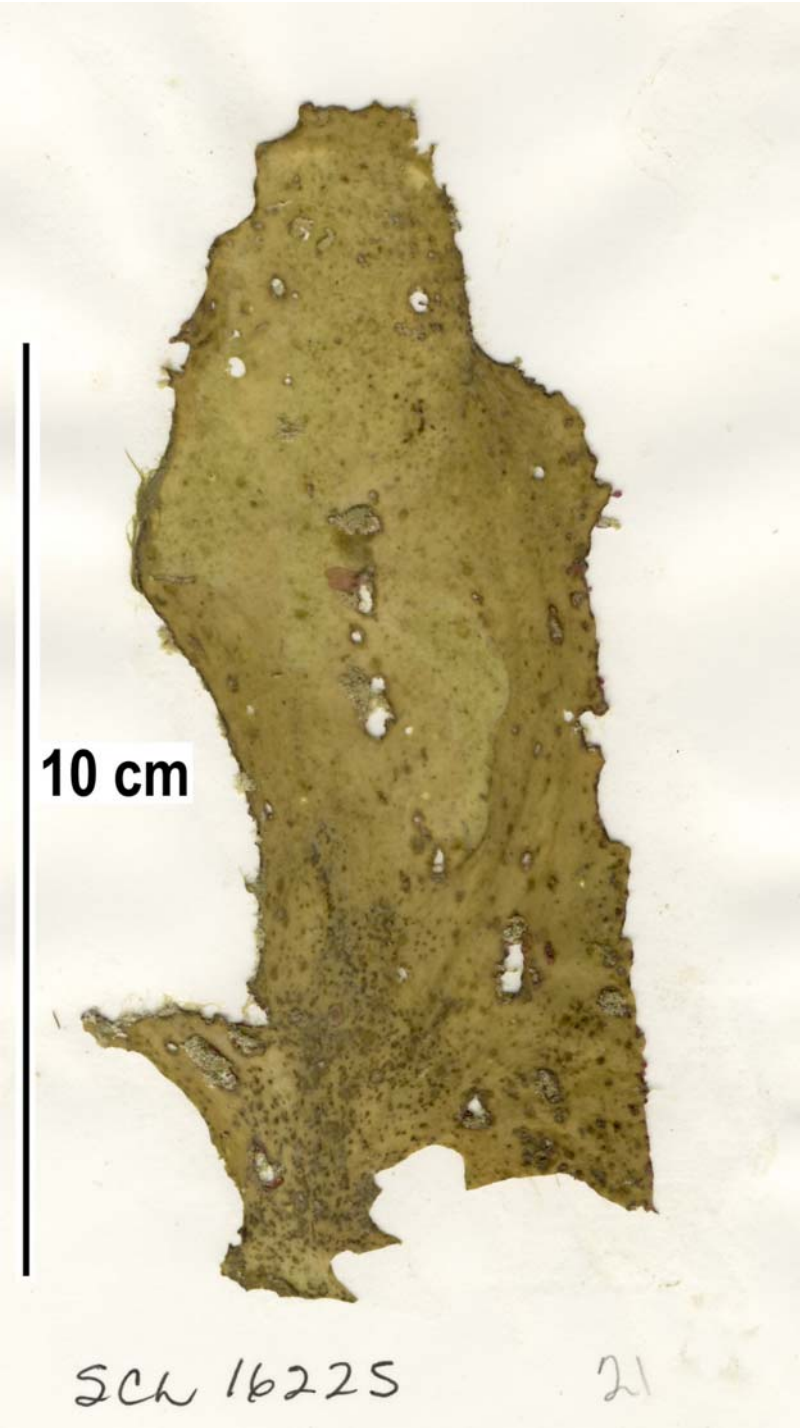
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Melanosiphon intestinalis 002
upper intertidal; bare bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Myrionema balticum 001
on Palmaria mollis; SCL# 16225-2; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Myrionema balticum 002
on Palmaria mollis; SCL# 16225; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Nereocystis luetkeana 001
low intertidal, dark brown kelp bioband; SCL# 16166; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Nereocystis luetkeana 002
young, low intertidal, rock, dark brown kelp bioband; ML-SS #0039;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Nereocystis luetkeana 003
bed just offshore in subtidal zone; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Petalonia fascia 001
low mid intertidal, red algae bioband; SCL# 16126; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Petalonia fascia 002
lower mid intertidal, red algae bioband; SCL# 16167; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Petalonia fascia 003
lower mid intertidal, red algae bioband; SCL# 16167-2; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Petalonia fascia 004
low intertidal boulder/cobble, sand/run-off, and Phyllospadix bed; SCL# 16287; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Petalonia fascia 005
low intertidal; Alaria bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Petalonia fascia 006
low intertidal; Alaria bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Punctaria sp 001
mid intertidal, rockweed bioband, unilocular; SCL# 16239; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pylaiella littoralis 001
red algae bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pylaiella littoralis 002
tidepool; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ralfsia fungiformis 001
low intertidal, soft brown kelp bioband; SCL# 16122; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ralfsia fungiformis 002
low mid intertidal, red algae bioband; SCL# 16191; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ralfsia fungiformis 003
encrusting; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ralfsia fungiformis 004
encrusting; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina 001
low intertidal, rock with boulders, Alaria and urchin barrens biobands; ML-SS #0079;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina cf nigripes 001
low intertidal, dark brown kelp bioband; SCL# 16170; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina cf nigripes 002
low intertidal; dark brown kelp bioband; ;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina latissima 001
low intertidal, soft brown kelp bioband; SCL# 16118; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina latissima 002
low intertidal; SCL# 16228; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina latissima 003
low intertidal; SCL# 16218; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina latissima 004
low intertidal; soft brown kelp bioband; ;
Portage Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina sessilis (or S druehlii or S nigripes) 001
short stype, low intertidal, rock, dark brown kelp bioband; ML-SS #0076;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina sessilis (or S druehlii or S nigripes) 002
short stype, low intertidal, rock, dark brown kelp bioband; ML-SS #0077;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina sessilis (or S druehlii) 001
low intertidal, between Alaria and dark kelp brown biobands; SCL# 16209; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina sessilis (or S druehlii) 002
low intertidal, between Alaria and dark kelp brown biobands; SCL# 16215; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Saccharina sessilis (or S druehlii) 003
low intertidal; soft brown kelp bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 001
low intertidal, boulder in cobble; SCL# 16077; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 002
mid intertidal, boulder on rock, wave cut channel, rockweed bioband; ML-SS #0081;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 003
mid intertidal, boulder on rock, wave cut channel, rockweed bioband; ML-SS #0082;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 004
mid to low intertidal, cobble/sand on rock, red algae bioband; ML-SS #0083;
Sutwik Island, May 9, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 005
mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0084;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 006
mid intertidal; rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 007
mid intertidal; rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 008
mid intertidal; rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

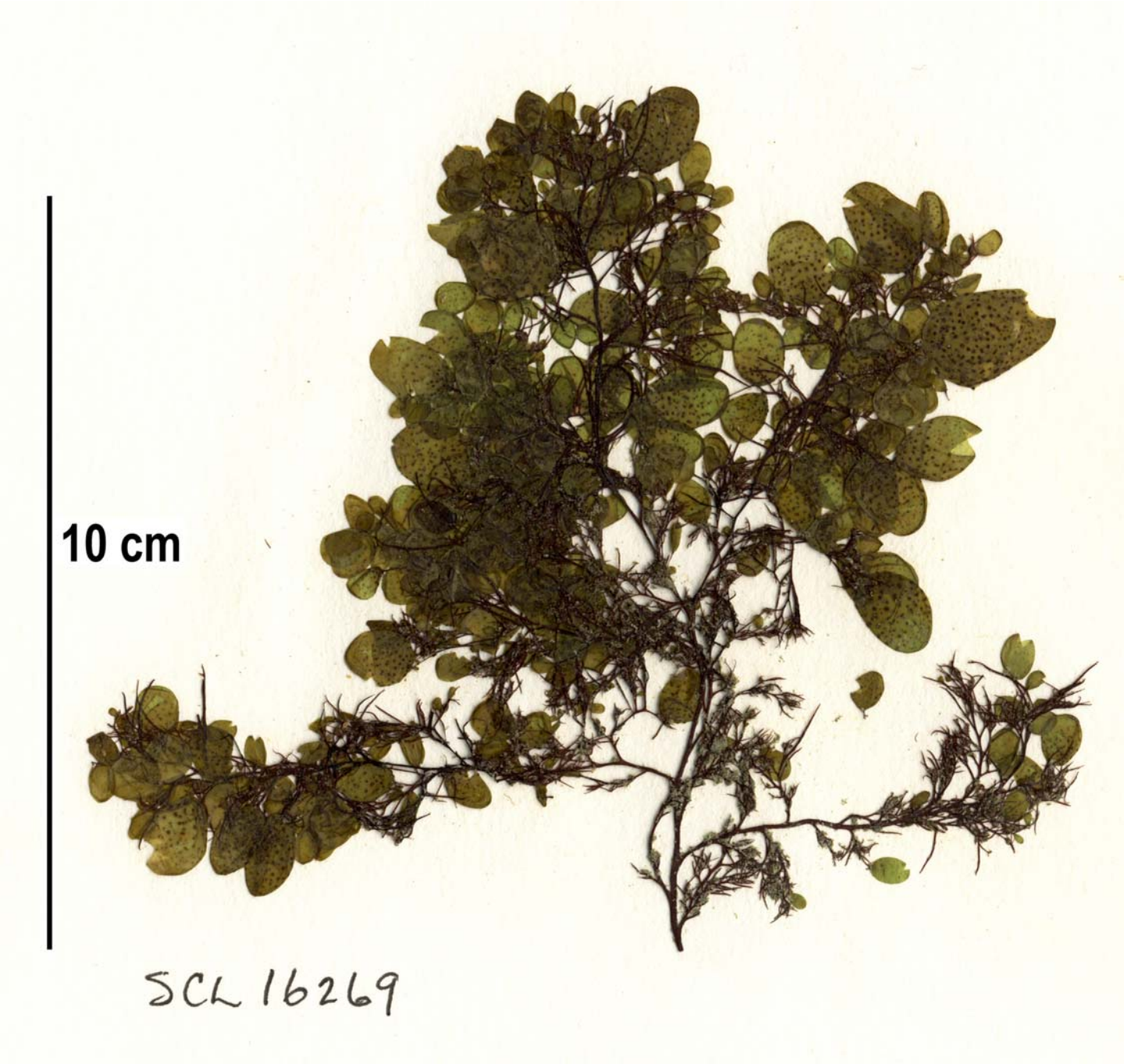
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scytosiphon lomentaria 009
mid intertidal; rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Soranthera ulvoidea 001
on Odonthalia floccosa; SCL# 16173; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Soranthera ulvoidea 002
on Odonthalia floccosa; SCL# 16269; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

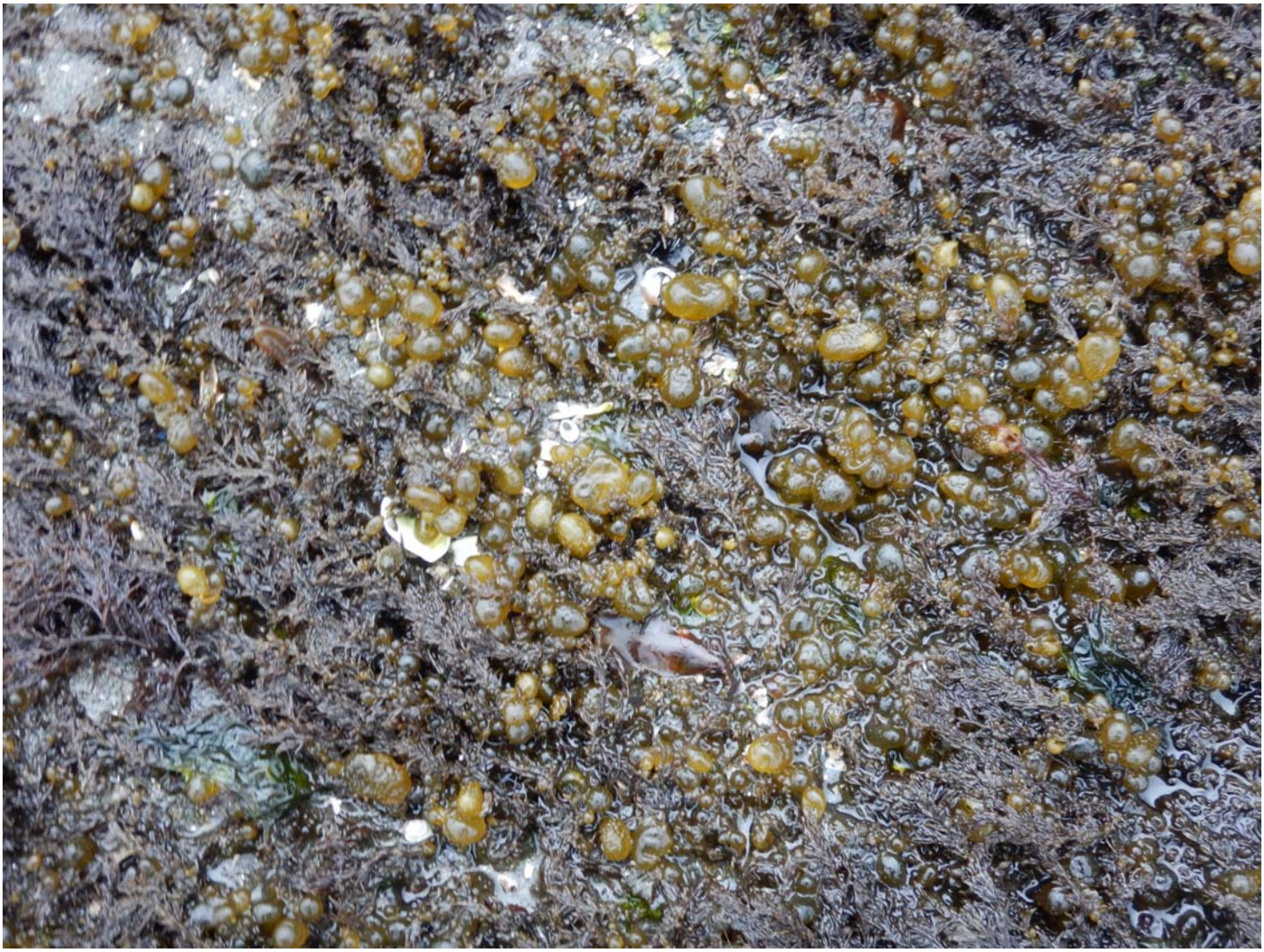
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Soranthera ulvoidea 003
on Odonthalia floccosa, low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0085;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Soranthera ulvoidea 004
saccate epiphyte on Odonthalia floccosa; ;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Soranthera ulvoidea 005
saccate ephiphyte on Neorhodomela; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sphacelaria rigidula 001
low intertidal, Alaria bioband; SCL# 16226; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Stephanocystis geminata 001
low intertidal, bedrock; SCL# 16198; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Stephanocystis geminata 002
epiphyte Coilodesme californica, low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0091; Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Stephanocystis geminata 003
epiphyte Coilodesme californica, low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0092;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Stephanocystis geminata 004
very low intertidal; dark brown kelp bioband; ;
Sutwik Island, May 8, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Digital Catalog of
Benthic Marine Algae
from the Alaska Peninsula

Red Seaweeds
Rhodophyta

May 2016

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ahnfeltia fastigiata 001
high intertidal, near water; SCL# 16270; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ahnfeltia fastigiata 002
low intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Antithamnionella pacifica 001
low intertidal; SCL# 16072; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Antithamnionella pacifica 002
lower mid intertidal, red algae bioband; SCL# 16157-1; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Antithamnionella pacifica 003
lower mid intertidal, red algae bioband; SCL# 16157-2; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

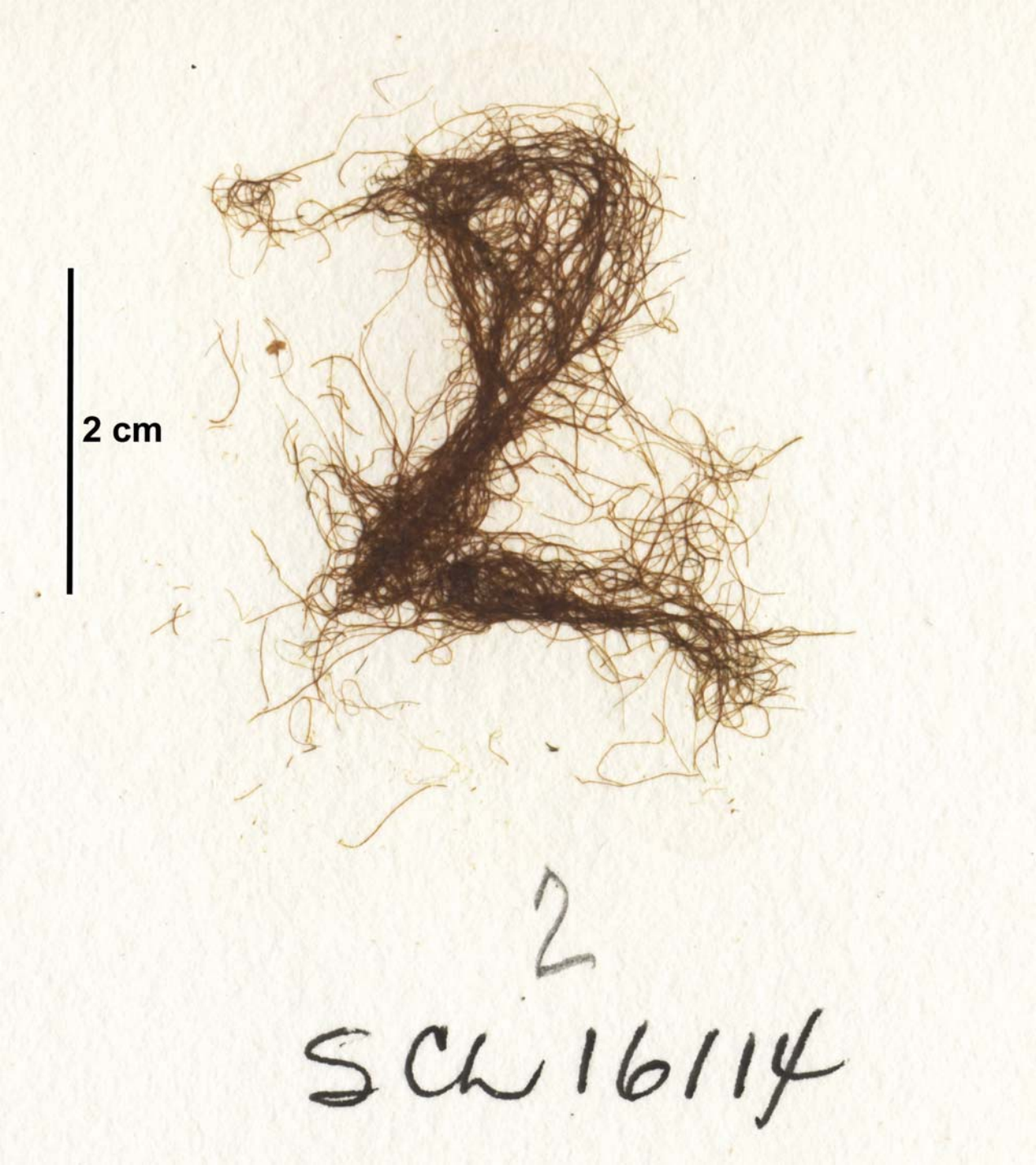
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 001
host - Gloiopeltis furcata; SCL# 16116; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 002
locally common between barnacle and rockweed biobands; SCL# 16113; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



"Bangia 2" sp 1 003
high intertidal; SCL# 16114; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

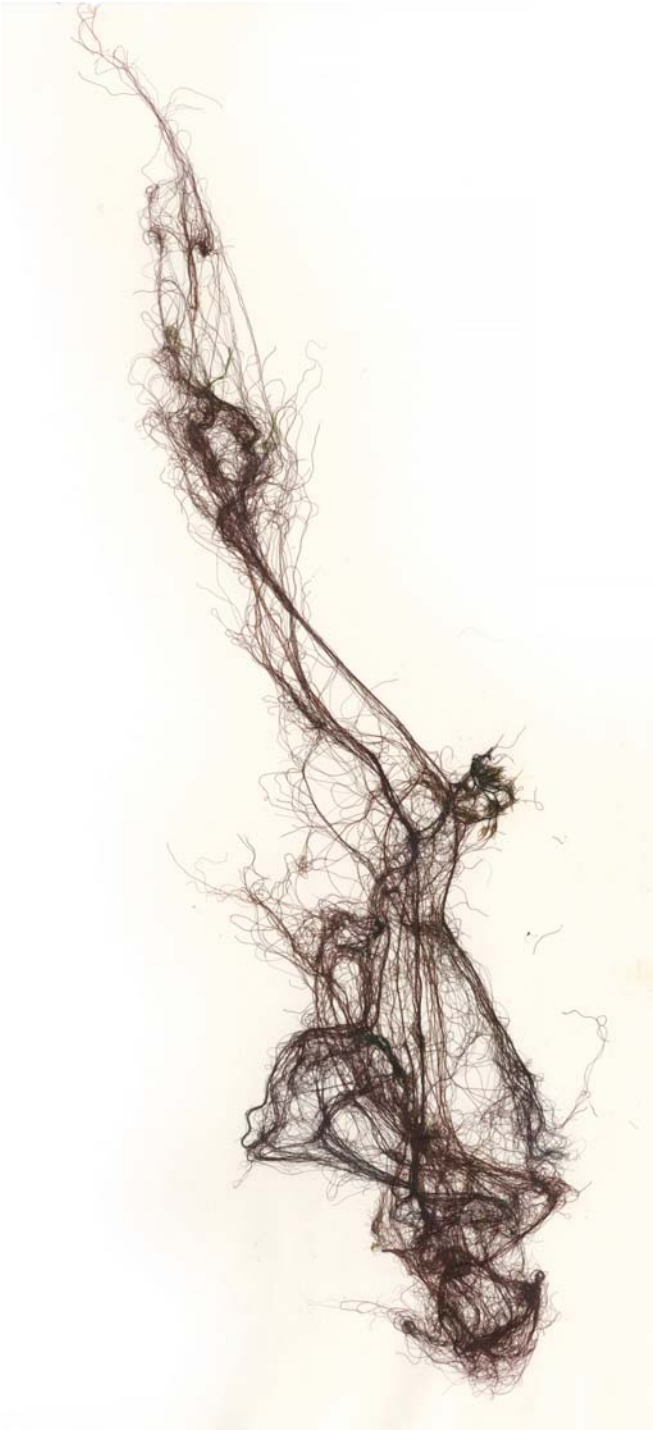
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 004
high intertidal; SCL# 16115; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 005
high intertidal; SCL# 16117; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



"Bangia 2" sp 1 006
upper intertidal, boulder, green algae bioband; ML-SS #0012;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 007
high intertidal; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 008
high intertidal; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

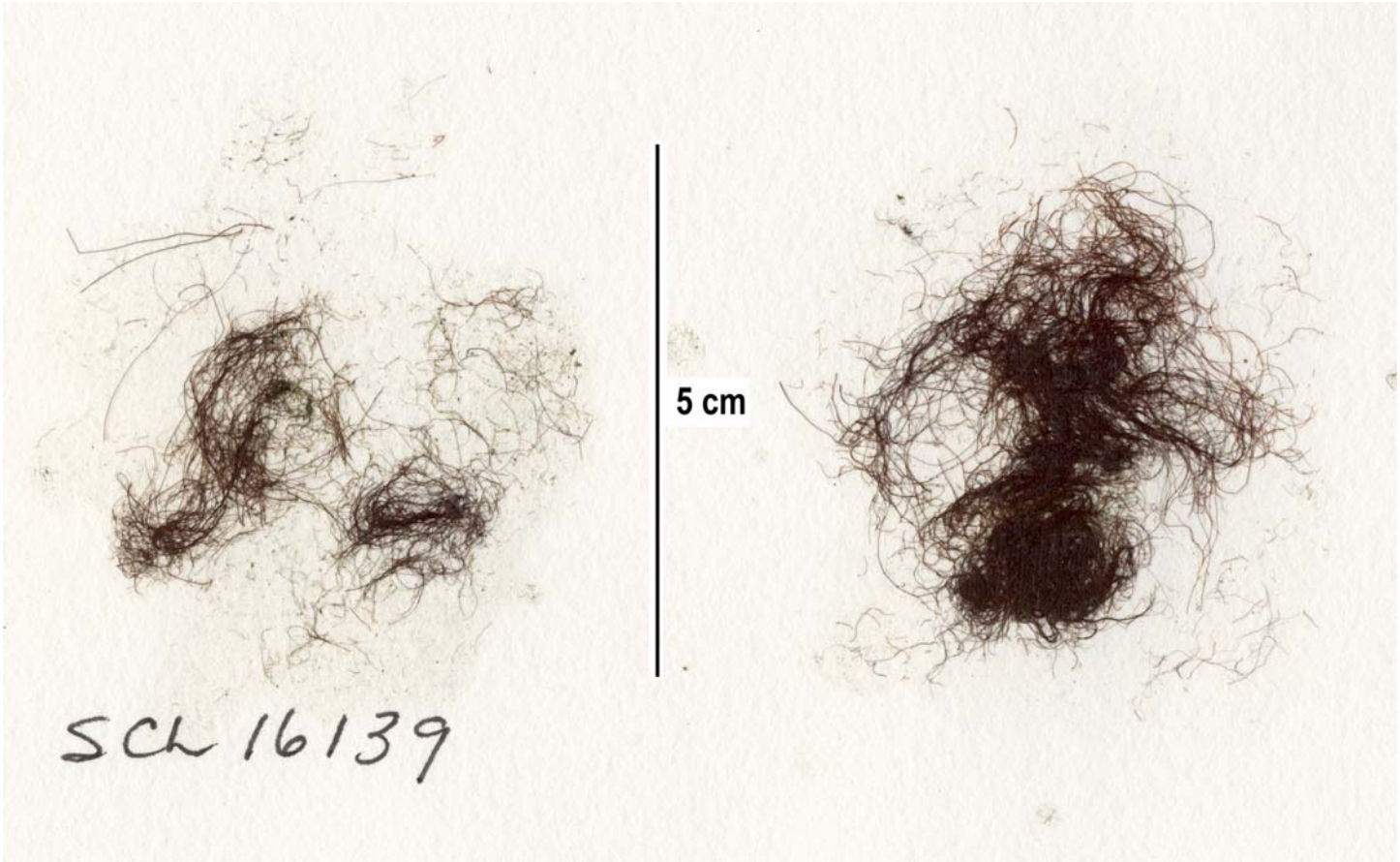
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 009
high intertidal; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 2" sp 1 010
high intertidal; ;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

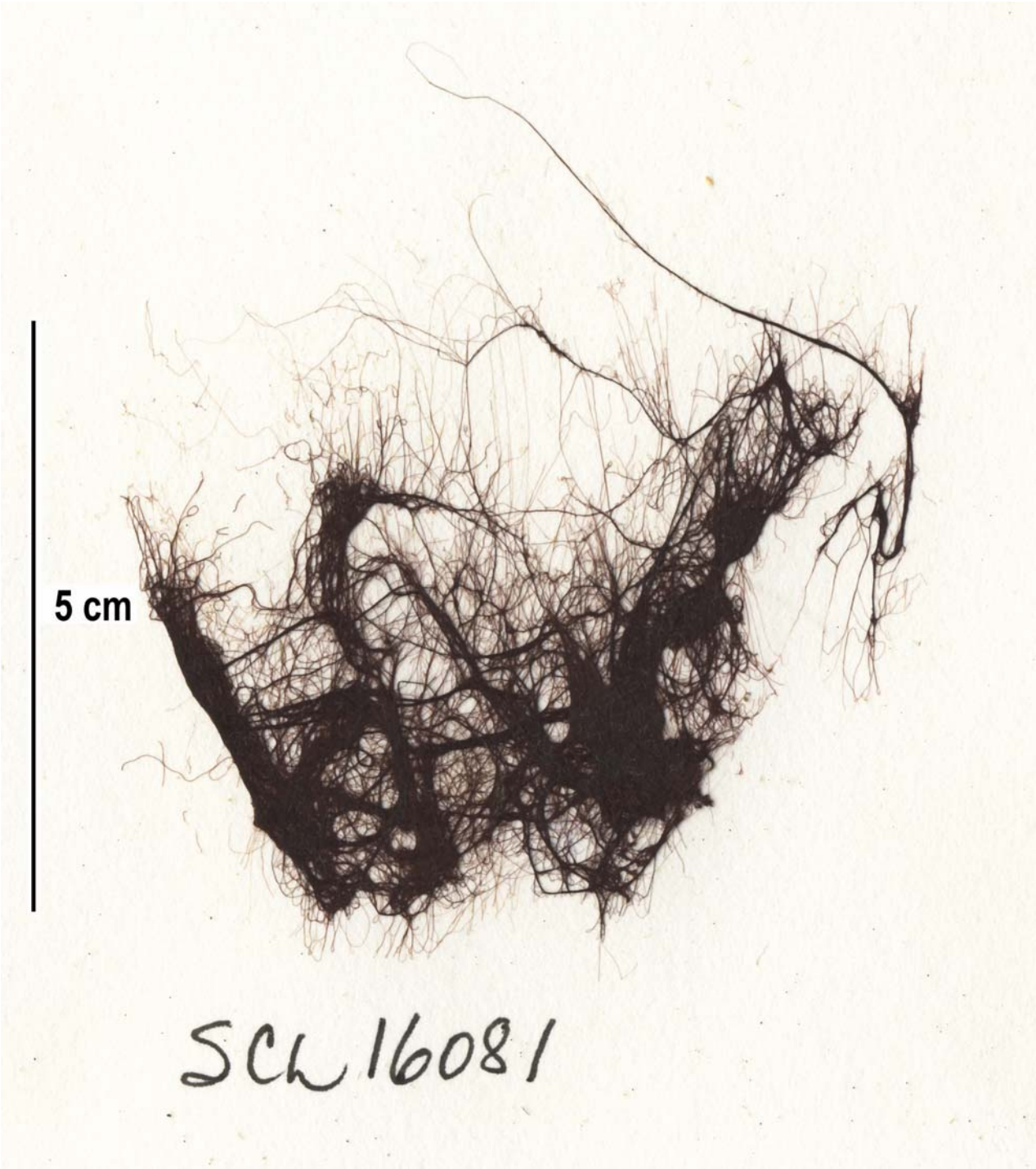


"Bangia 3" sp 1 001
high intertidal; SCL# 16139; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 3" sp 3 001
upper mid intertidal, barnacle bioband; SCL# 16264; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



"Bangia 3" sp 3 variant 001
green algal bioband; SCL# 16081; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 3" sp 3 variant 002
high intertidal, bedrock, green algae bioband; SCL# 16184; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia 3" sp 3 variant 003
upper mid intertidal, barnacle bioband; SCL# 16235; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

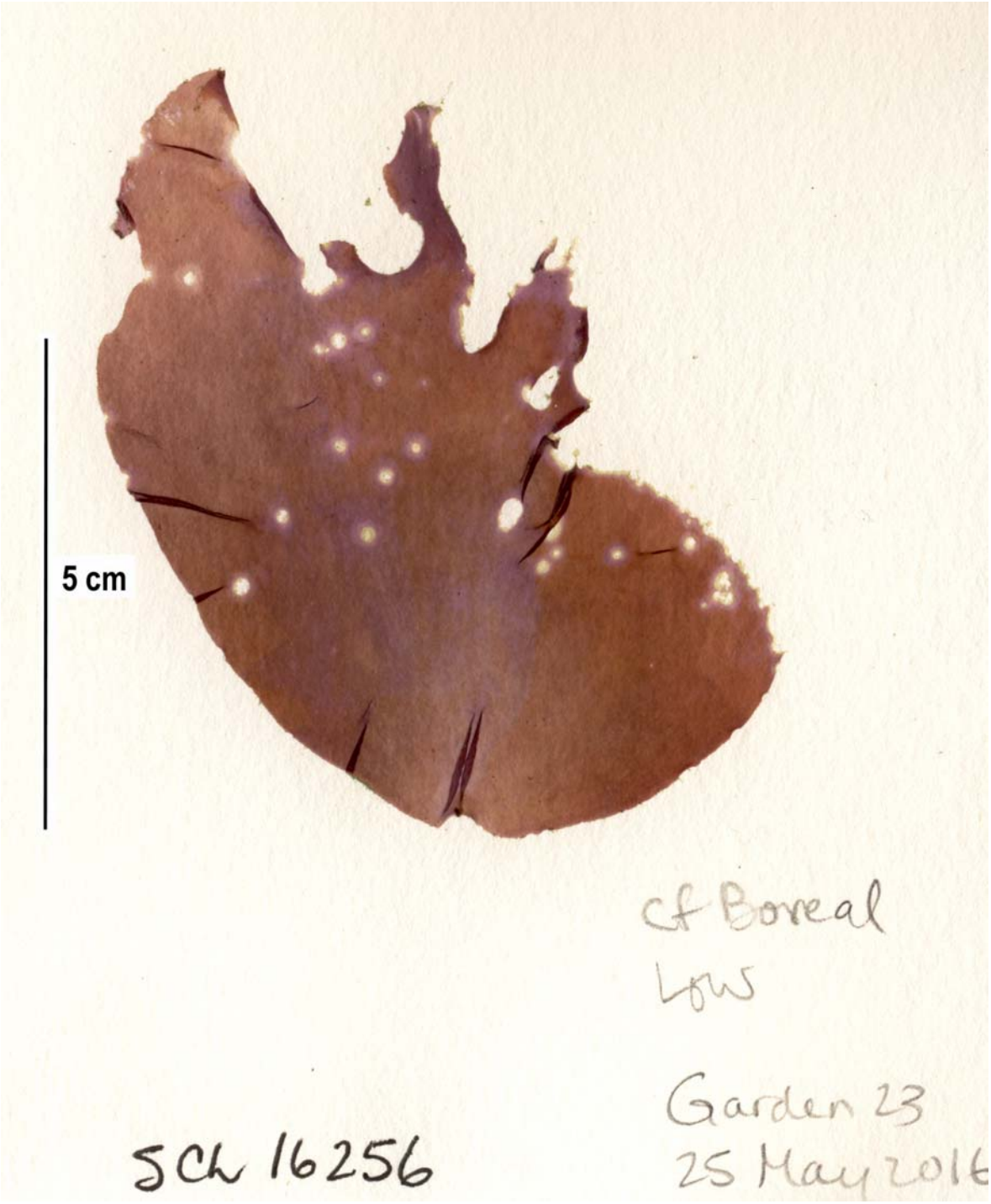
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia" sp 001
high intertidal; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

"Bangia" sp 002
high intertidal; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Boreophyllum cf aleuticum 001
low intertidal; SCL# 16256; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

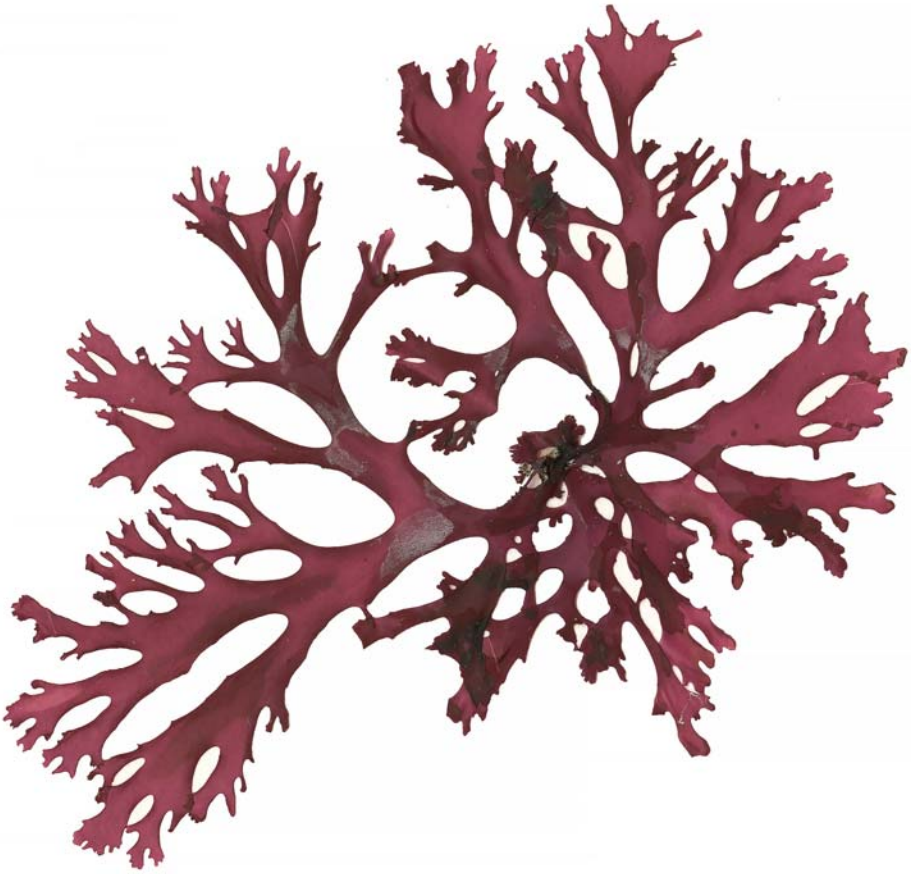
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Bossiella frondescens 001
low intertidal on bedrock; SCL# 16073; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Bossiella frondescens 002
tidepool; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

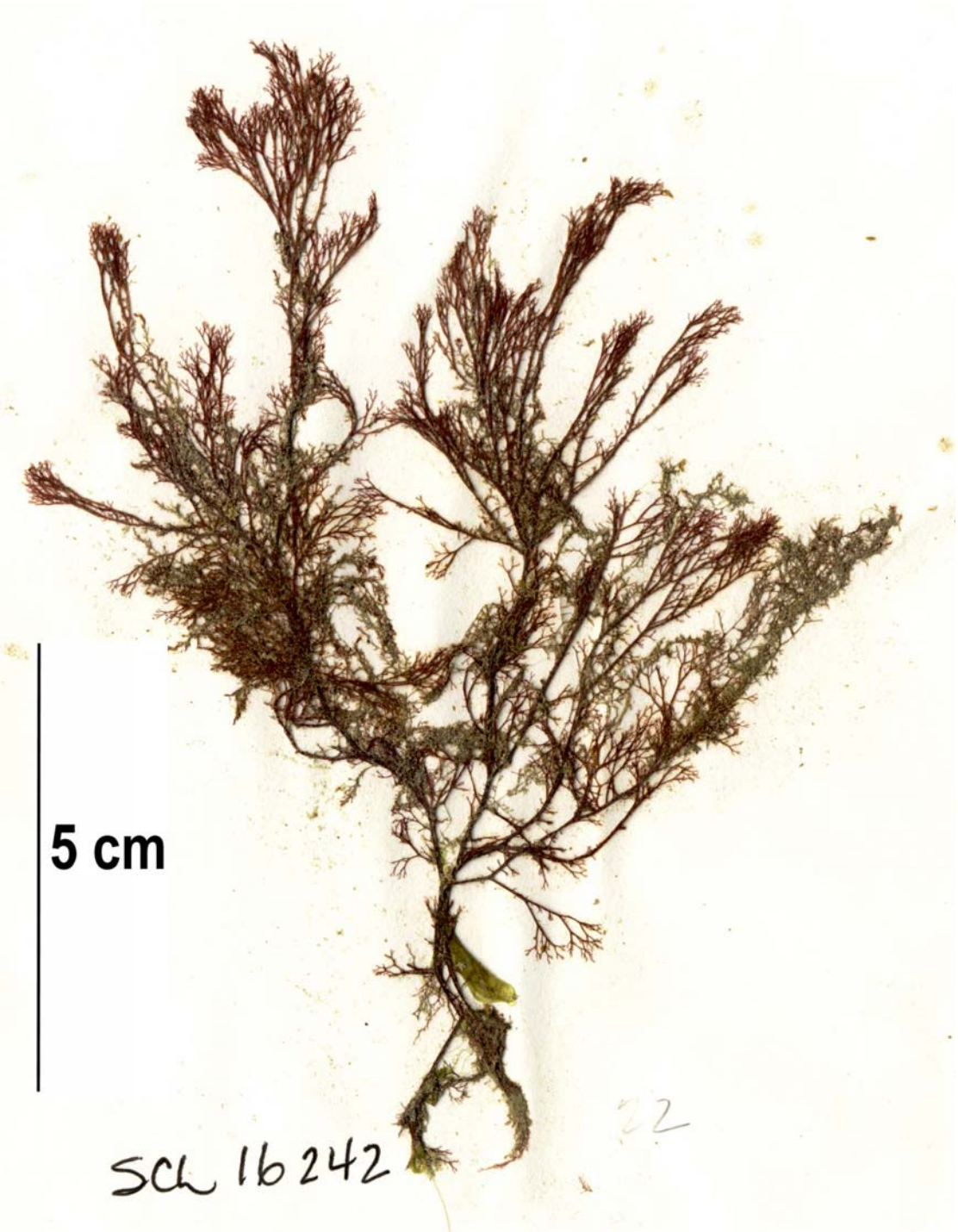


Callophyllis sp 001
low intertidal, boulder, red algae bioband; ML-SS #0013;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

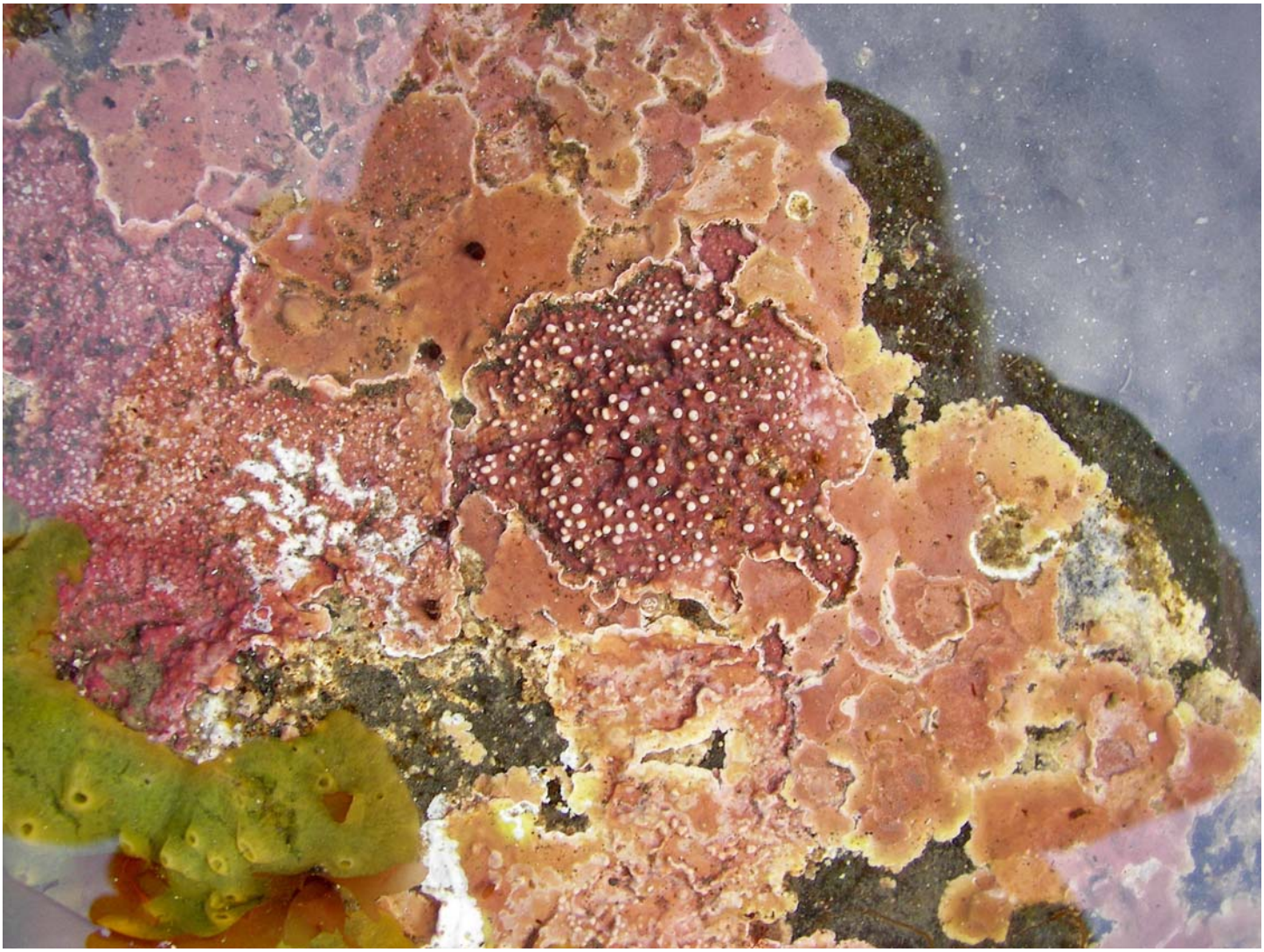
Ceramium cf pacificum 001
low intertidal, soft brown kelp bioband; SCL# 16127; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Ceramium pacificum 001
low intertidal, bleached algae red bioband; SCL# 16242; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

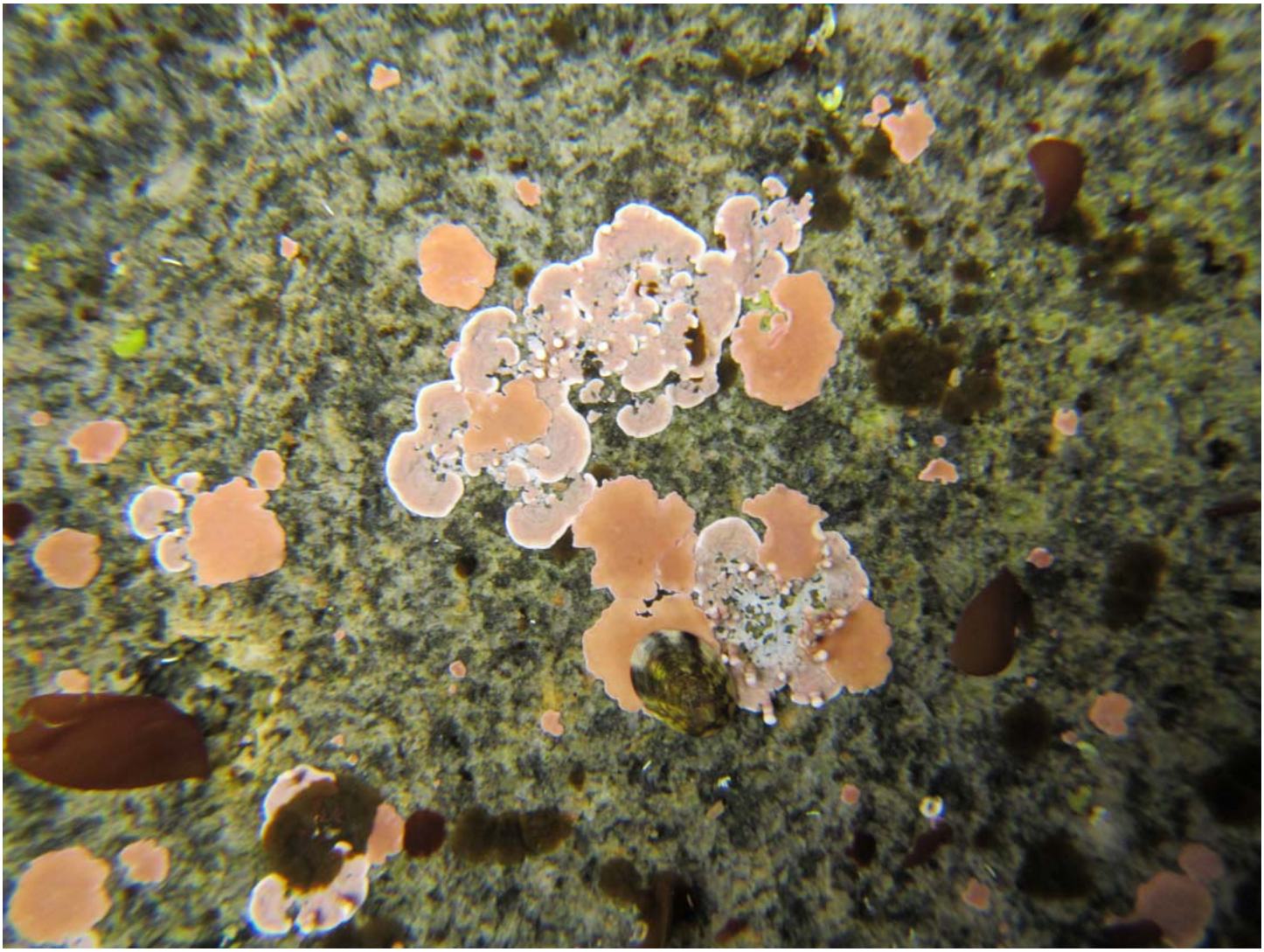


Clathromorphum & Lithothamnion 001
Clathromorphum (smooth crust) and Lithothamnion (bumpy crust); low intertidal tidepool; urchin barrens bioband; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Clathromorphum & Lithothamnion 002
Clathromorphum (smooth crust) and Lithothamnion (bumpy crust); urchin barrens bioband; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Clathromorphum & Lithothamnion 003
Clathromorphum (smooth crust) and Lithothamnion (bumpy crust); ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Constantinea subulifera 001
lower intertidal, red algae bioband; SCL# 16207; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

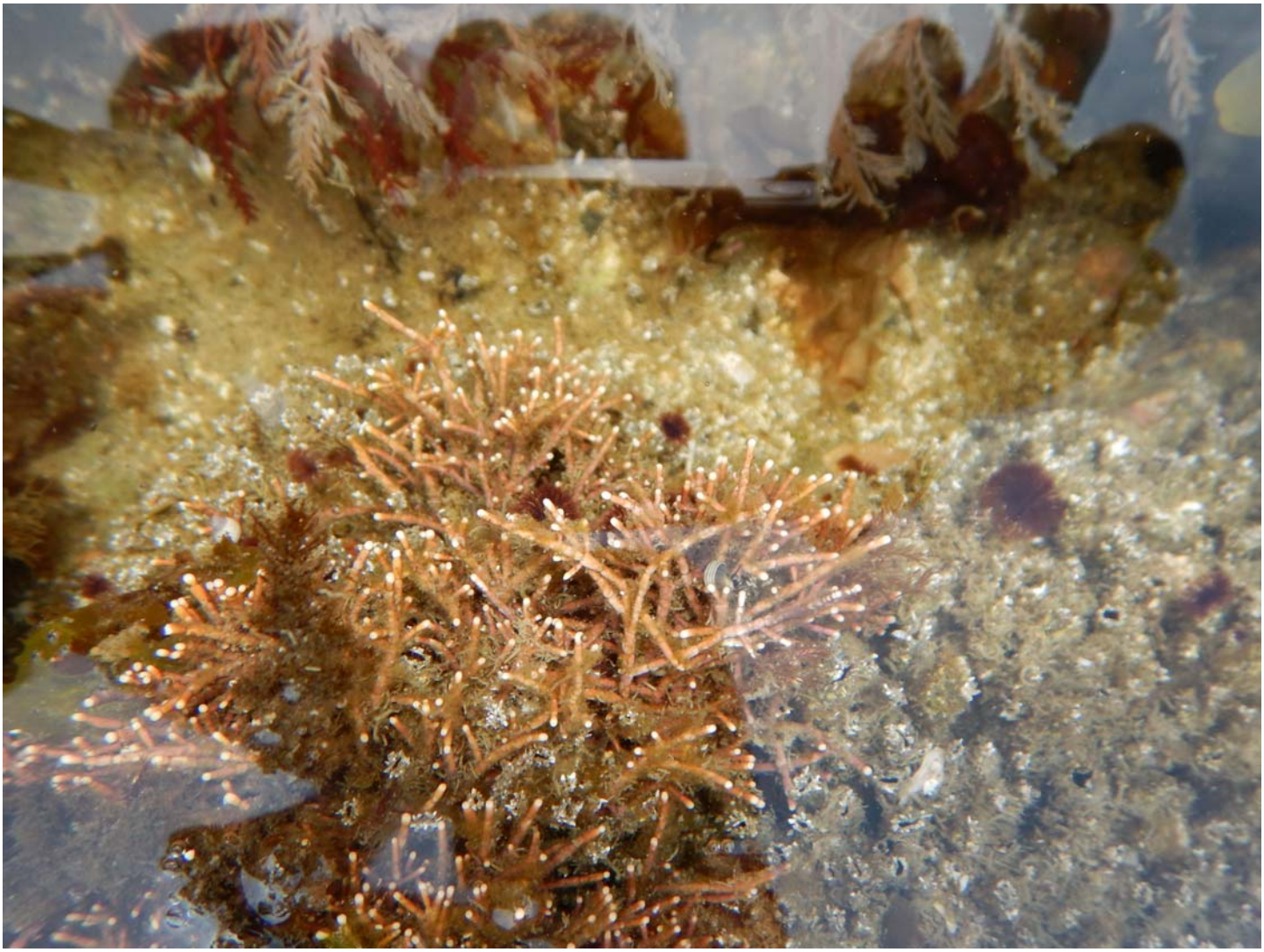
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Constantinea subulifera 002
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Corallina officinalis 001
low intertidal, soft brown kelp bioband; SCL# 16120; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Corallina officinalis 002
tidepool; mid to low intertidal in wide red algae bioband; ;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cryptosiphonia woodii 001
lower intertidal, red algae bioband; SCL# 16098; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

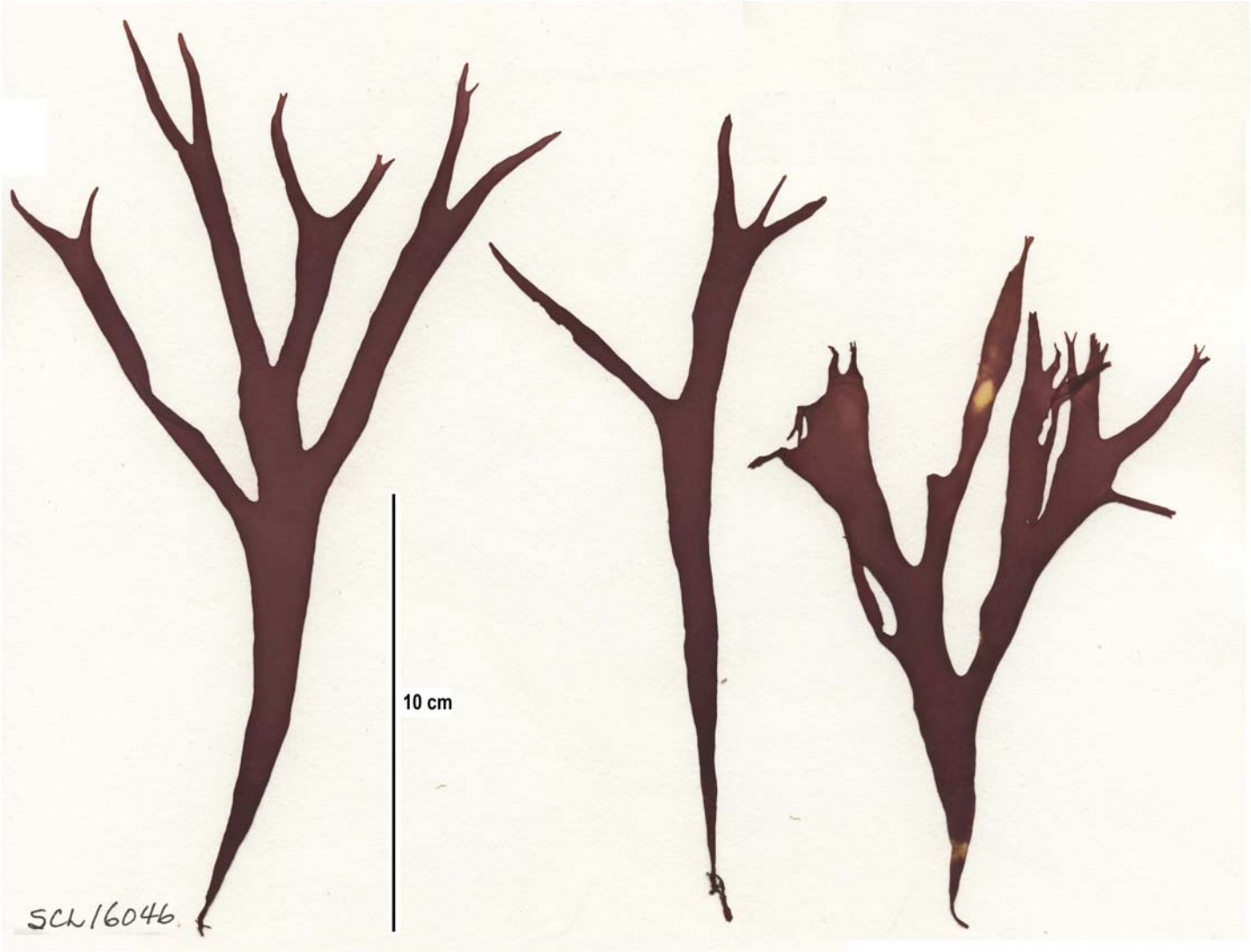
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cryptosiphonia woodii 002
mid intertidal, boulder/cobble on rock, rockweed bioband; ML-SS #0020;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Cryptosiphonia woodii 003
mid intertidal, boulder, rockweed bioband; ML-SS #0021;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Devaleraea callophylloides 001
Alaria bioband; SCL# 16046; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

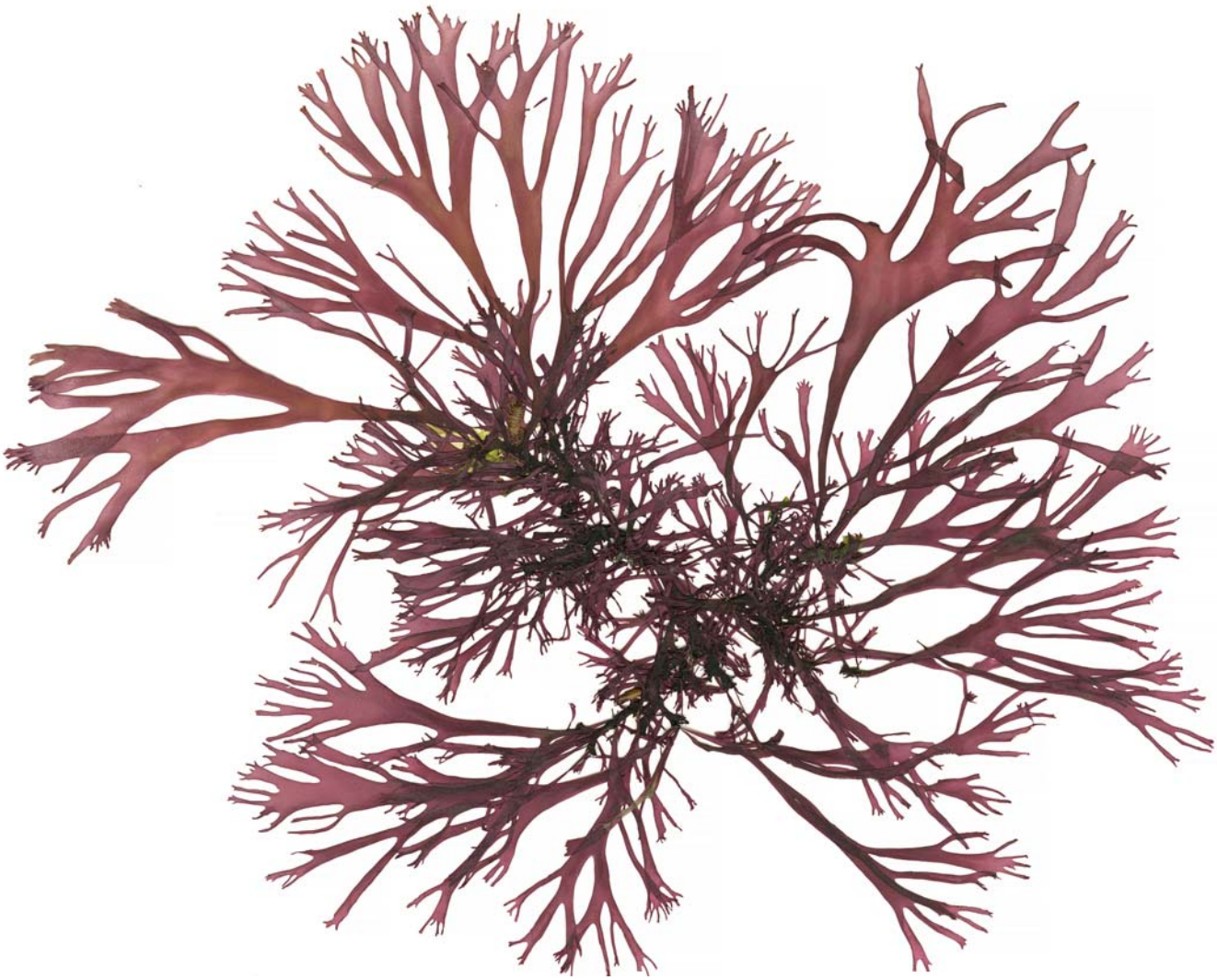
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides 002
low intertidal, rock, Alaria bioband; ML-SS #0048;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides 003
mid intertidal, boulder, rockweed bioband; ML-SS #0049;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Devaleraea callophylloides 004
mid intertidal, boulder on rock, rockweed bioband; ML-SS #0050;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides 005
mid intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides 006
red algae bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides 007
rockweed bioband; ;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides hollow form 001
low intertidal, cobble, in freshwater run-off; SCL# 16285; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides hollow form 002
mid to low interidal, sand-pebble-cobble; ML-SS #0051;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides hollow form 003
mid to low interidal, sand-pebble-cobble; ML-SS #0052;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea callophylloides hollow form 004
low lying channel with sand and cobble; green algae bioband; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 001
low interitdal, boulder/cobble on rock, bleached red bioband; ML-SS #0054;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 002
low interitdal, boulder/cobble on rock, bleached red bioband; ML-SS #0055;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 003
mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0056;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 004
mid to low intertidal, boulder on rock, red algae and dark brown kelp biobands; ML-SS #0053;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 005
low interitdal, boulder/cobble on rock, bleached red bioband; ML-SS #0057;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 006
mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0058;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

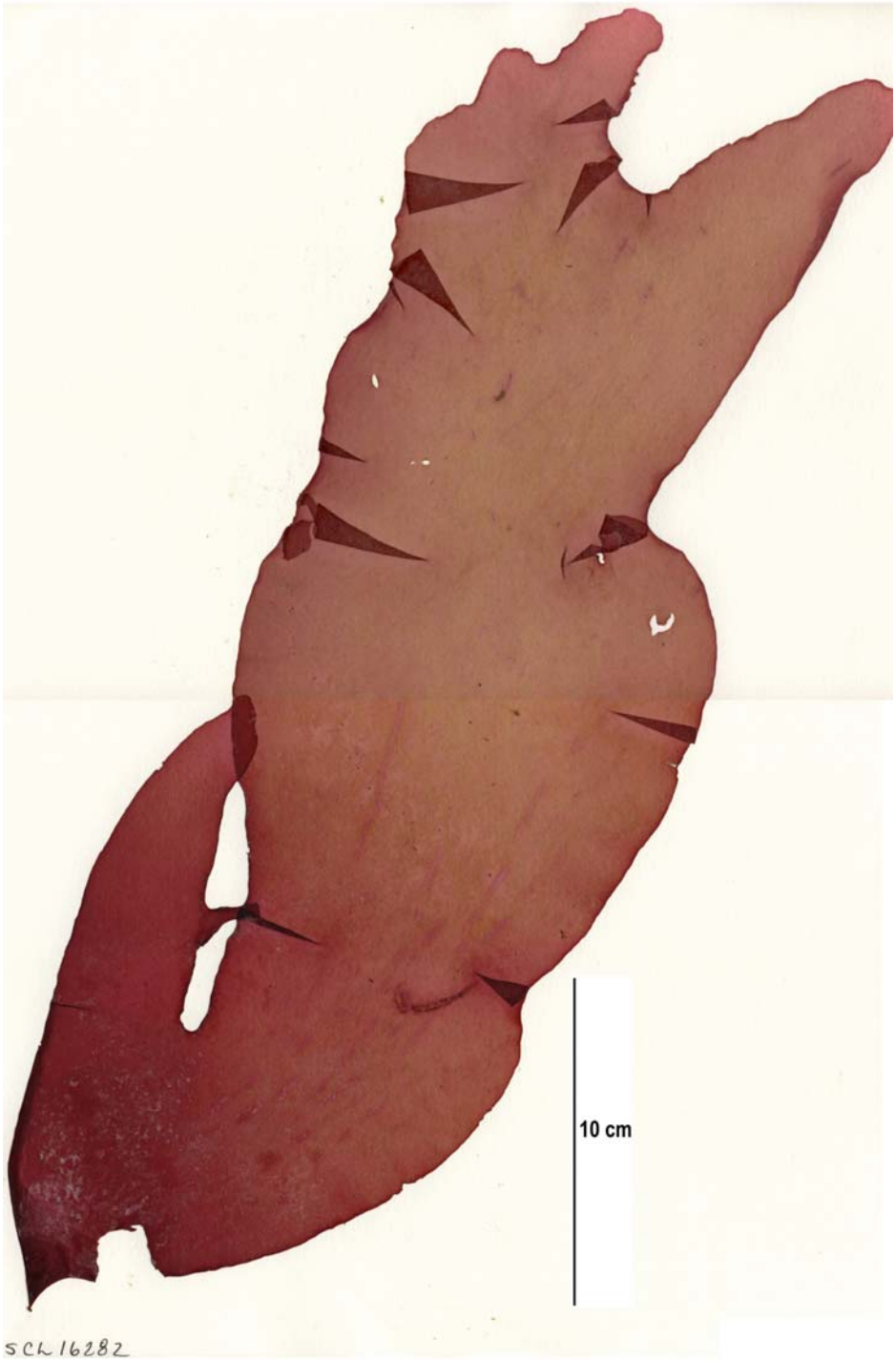
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 007
lower mid intertidal, red algae bioband; SCL# 16172; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 008
low intertidal, red algae and Alaria biobands; SCL# 16224; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Devaleraea mollis 009
low intertidal; SCL# 16282; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 010
mid intertidal, boulder on rock, wave cut channel, rockweed bioband; ML-SS #0063;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 011
mid intertidal, boulder on rock, wave cut channel, rockweed bioband; ML-SS #0064;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 012
mid intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

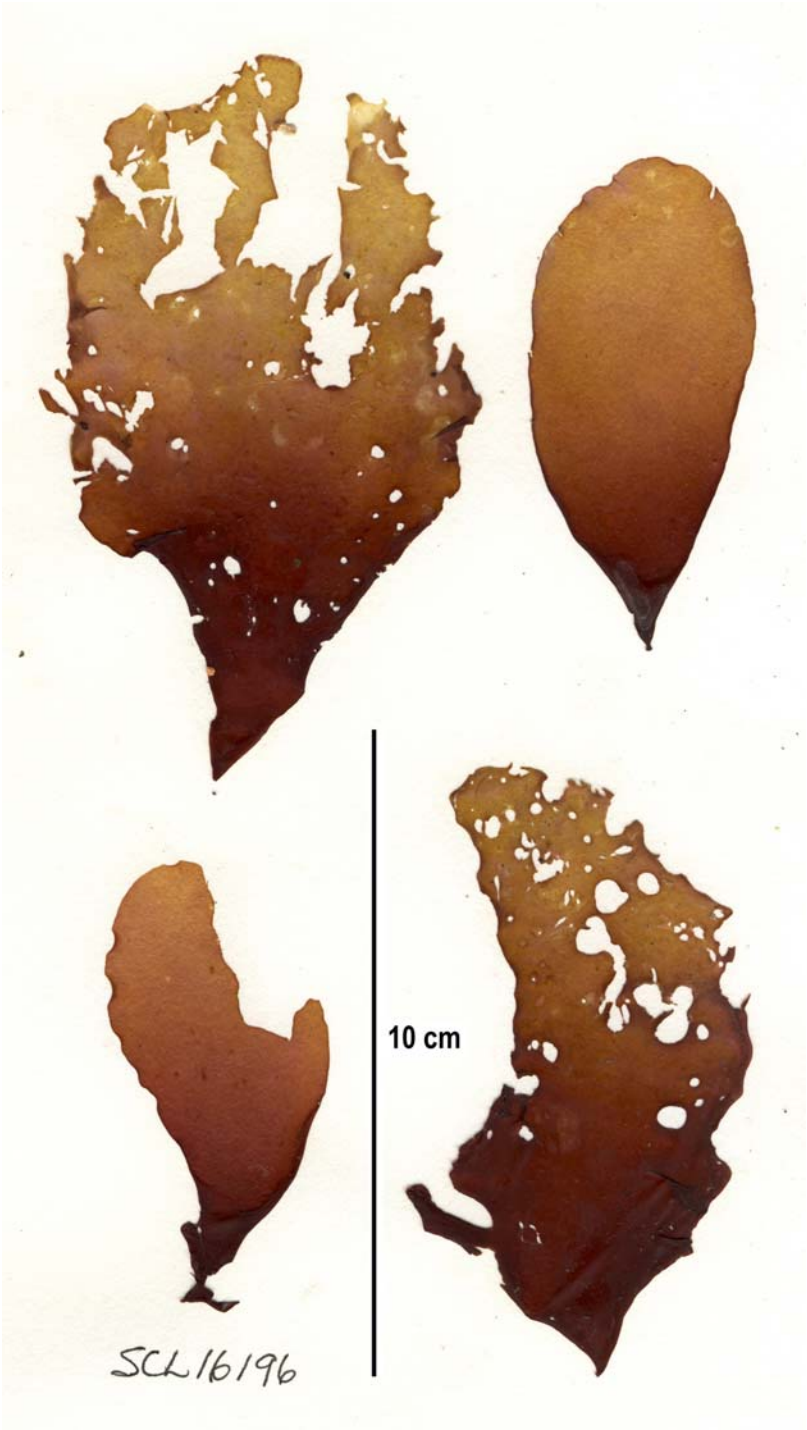
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 013
bleached red algae bioband; ;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Devaleraea mollis 014
bleached red algae bioband; ;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Dilsea californica 001
low intertidal, bedrock; SCL# 16196; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

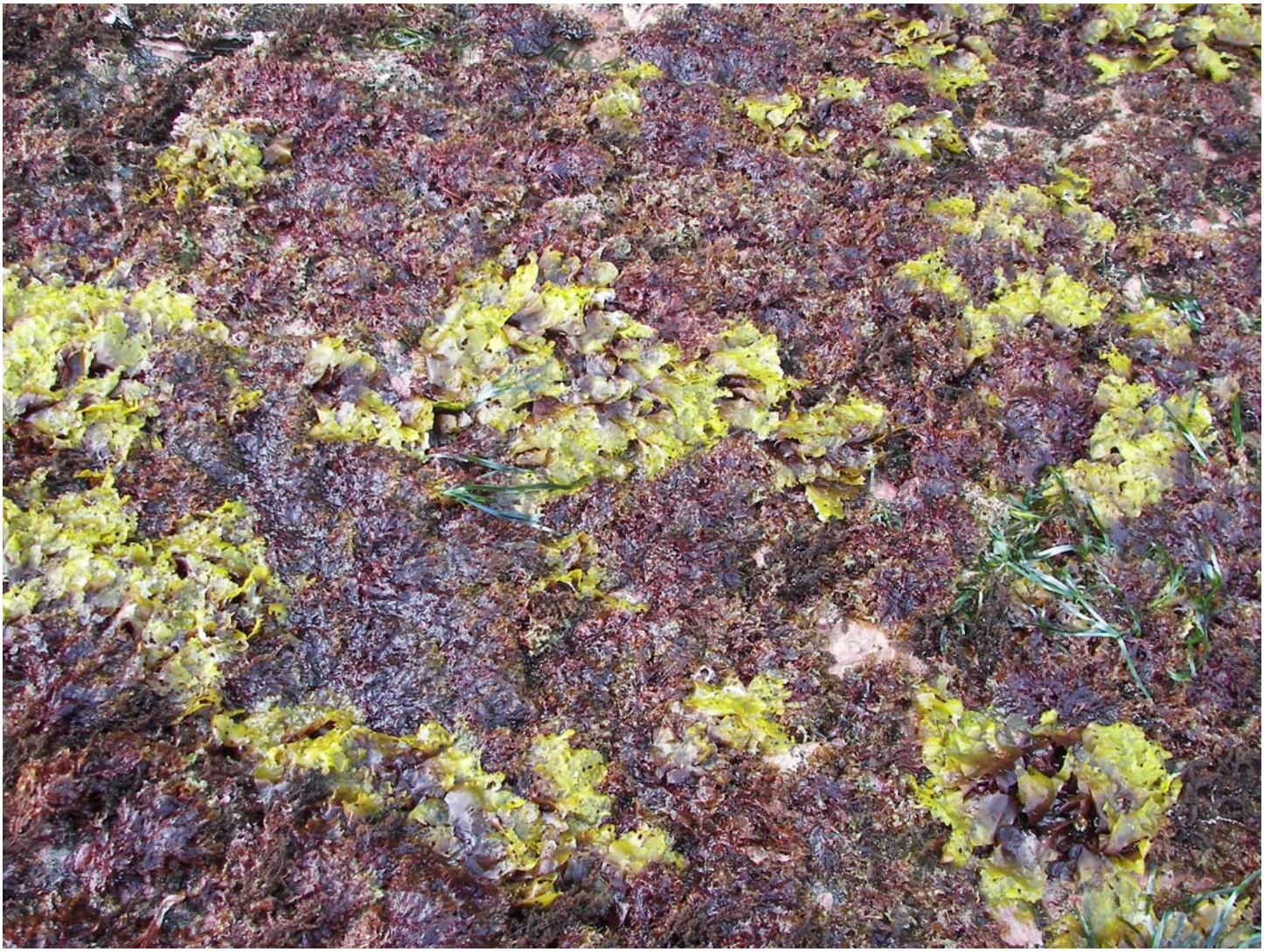
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dilsea californica 002
low intertidal, bedrock; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dilsea californica 003
low intertidal, bedrock; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Dilsea californica 004
low intertidal, bedrock; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dumontia alaskana 001
lower intertidal, red algae bioband; SCL# 16095; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dumontia alaskana 002
low intertidal, cobble-sand-boulder, surfgrass bioband; ML-SS #0024;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dumontia alaskana 003
low intertidal, cobble-sand-boulder, surfgrass bioband; ML-SS #0025;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dumontia alaskana 004
tidepool; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dumontia simplex 001
lower mid intertidal; boulder/cobble; SCL# 16279; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Dumontia simplex 002
mid intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

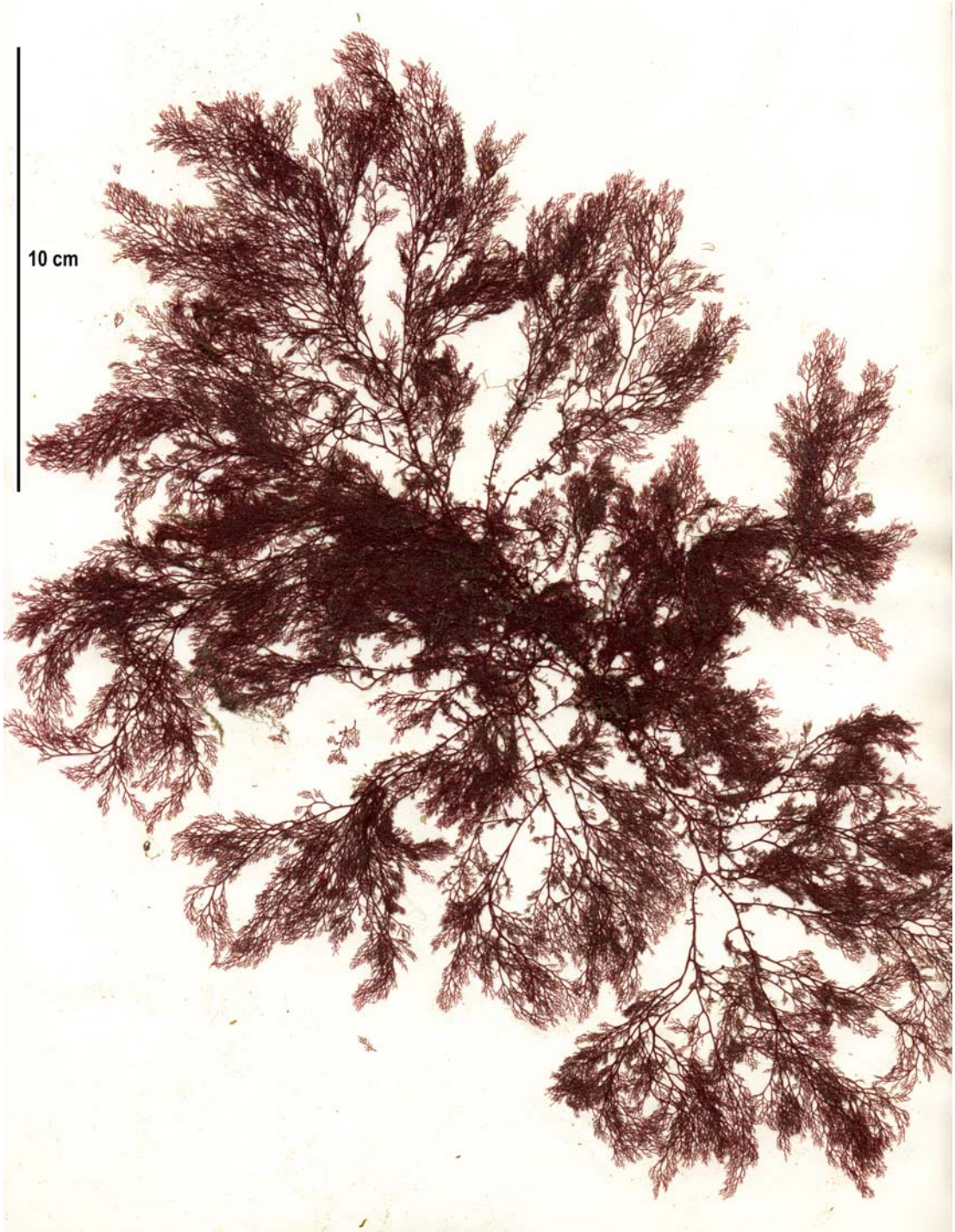
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Endocladia muricata 001
mid intertidal, rockweed bioband; SCL# 16135; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

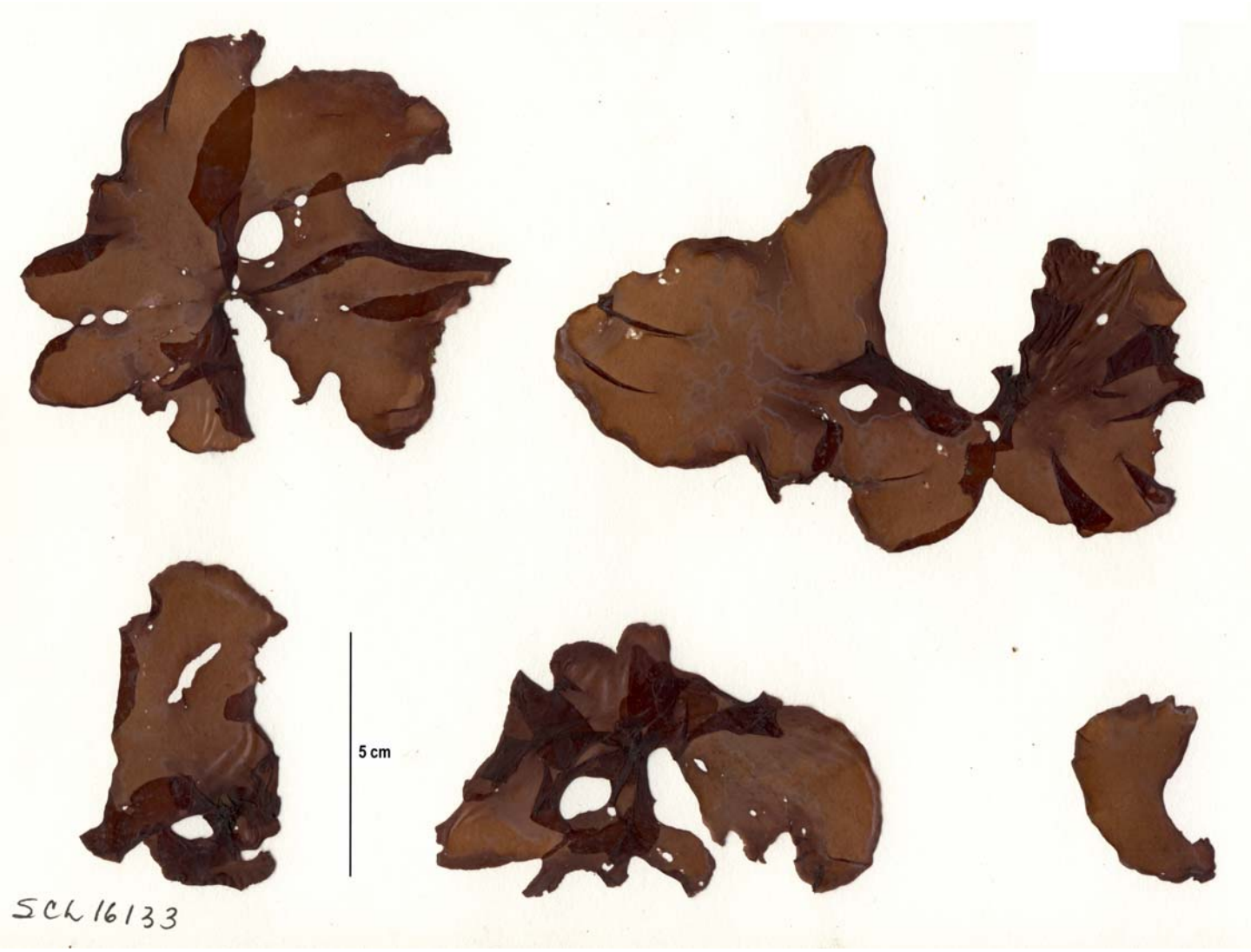
Endocladia muricata 002
upper intertidal; barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Euthora cristata 001
drift; SCL# 16237; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Fuscifolium papenfussii 001
mid intertidal, rockweed bioband, dark area; SCL# 16133; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

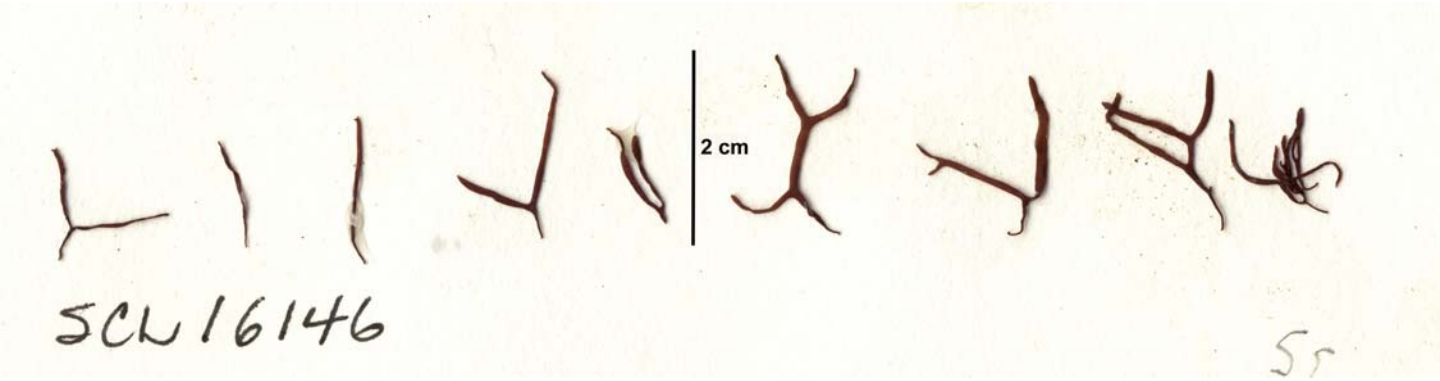
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Gloiopeltis furcata 001
low intertidal, rock; SCL# 16087; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Gloiopeltis furcata 002
lower mid intertidal, boulder; SCL# 16125; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Gloiopeltis furcata 003
high intertidal, bedrock, Winter laver bioband; SCL# 16146; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Gloiopeltis furcata 004
upper intertidal; bare bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Gloiopeltis furcata 005
upper intertidal; barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Gloiopeltis furcata 006
upper intertidal; barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Gloiopeltis furcata 007
upper intertidal; barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion 001
high intertidal, bedrock; SCL# 16108; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion firmum 001
low intertidal, bleached algae red bioband; SCL# 16236; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion firmum 002
mid intertidal, cobble/boulder on rock, red algae bioband; ML-SS #0026;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion firmum 003
low intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion firmum 004
low intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion firmum 005
low intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion firmum 006
low intertidal; bleached red bioband; ;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion glandiforme 001
lower intertidal, red algae bioband; SCL# 16105; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion glandiforme 002
lower mid intertidal, red algae bioband; SCL# 16119; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion glandiforme 003
rockweed bioband; SCL# 16254; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion glandiforme 004
mid to low intertidal; red algae bioband; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

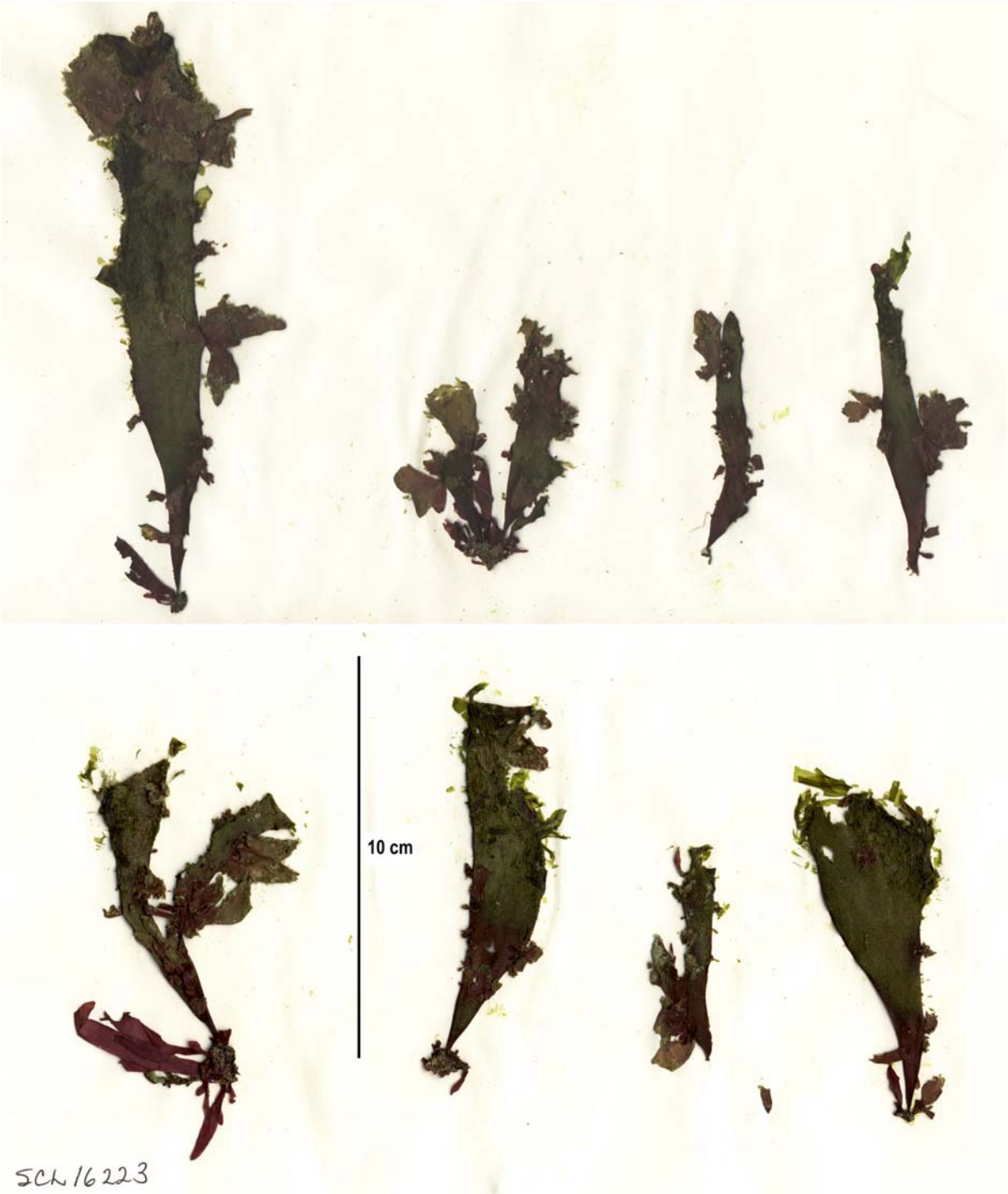
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion glandiforme 005
red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion sp nov 001
on Palmaria hecatensis, low intertidal, rock in sand; SCL# 16141; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Halosaccion sp nov 002
on Palmaria hecatensis; SCL# 16223; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Halosaccion sp nov 003
on Palmaria hecatensis; SCL# 16248; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Hildenbrandia rubra 001
on cobble; mid intertidal; rockweed bioband; ;
Port Wrangell, May 10, 2016; AKP16_37v; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Kallymeniopsis sp 001
low intertidal, boulder, red algae bioband; ML-SS #0027;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus alaskensis 001
mid intertidal, rockweed bioband; SCL# 16142; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus alaskensis 002
barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus alaskensis 003
barnacle bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus alaskensis 004
green algae bioband; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

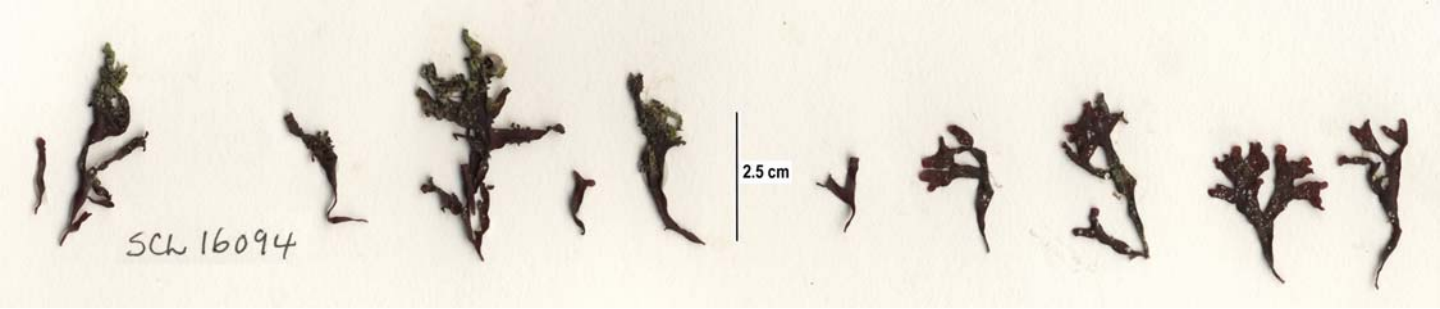
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus latissimus 001
rockweed bioband; SCL# 16049; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

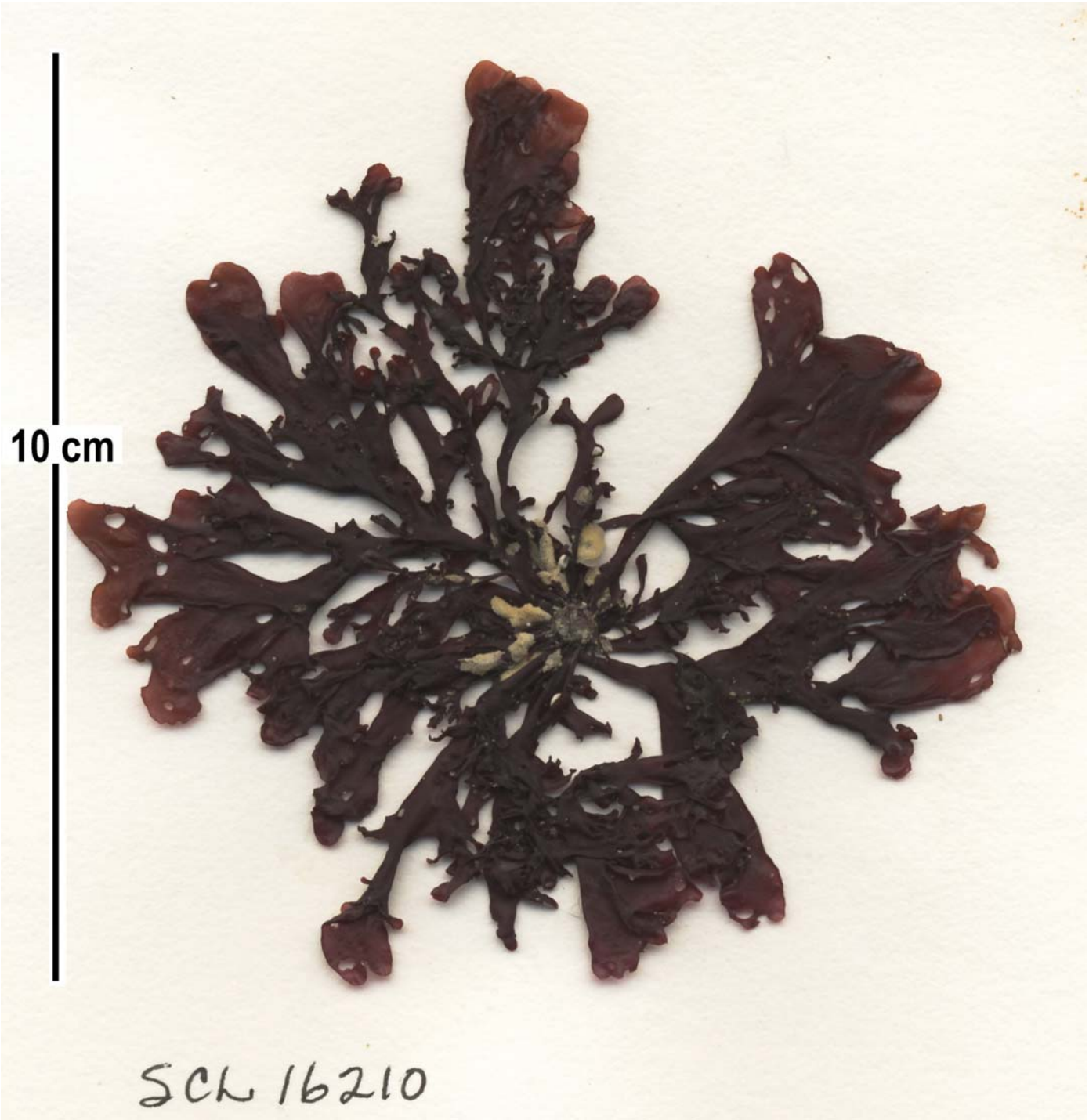
Mastocarpus latissimus 002
lower intertidal, red algae bioband; SCL# 16090; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Mastocarpus latissimus 003
lower intertidal, red algae bioband; SCL# 16094; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Mastocarpus latissimus 004
low intertidal, Alaria bioband; SCL# 16210; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus latissimus 005
lower mid intertidal, red algae bioband; SCL# 16267; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus latissimus 006
low intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus latissimus 007
low intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mastocarpus pacificus 001
low intertidal, soft brown kelp bioband; SCL# 16111; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parksii 001
high intertidal; turf forming;; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03983 W156.74269

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parksii 002
high intertidal; turf forming;; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03983 W156.74269

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parksii 003
high intertidal; turf forming;; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03983 W156.74269

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parksii 004
high intertidal; turf forming;; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03983 W156.74269

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parksii 005
high intertidal; turf forming;; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03983 W156.74269

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parvula 001
low intertidal, Alaria bioband; SCL# 16288; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

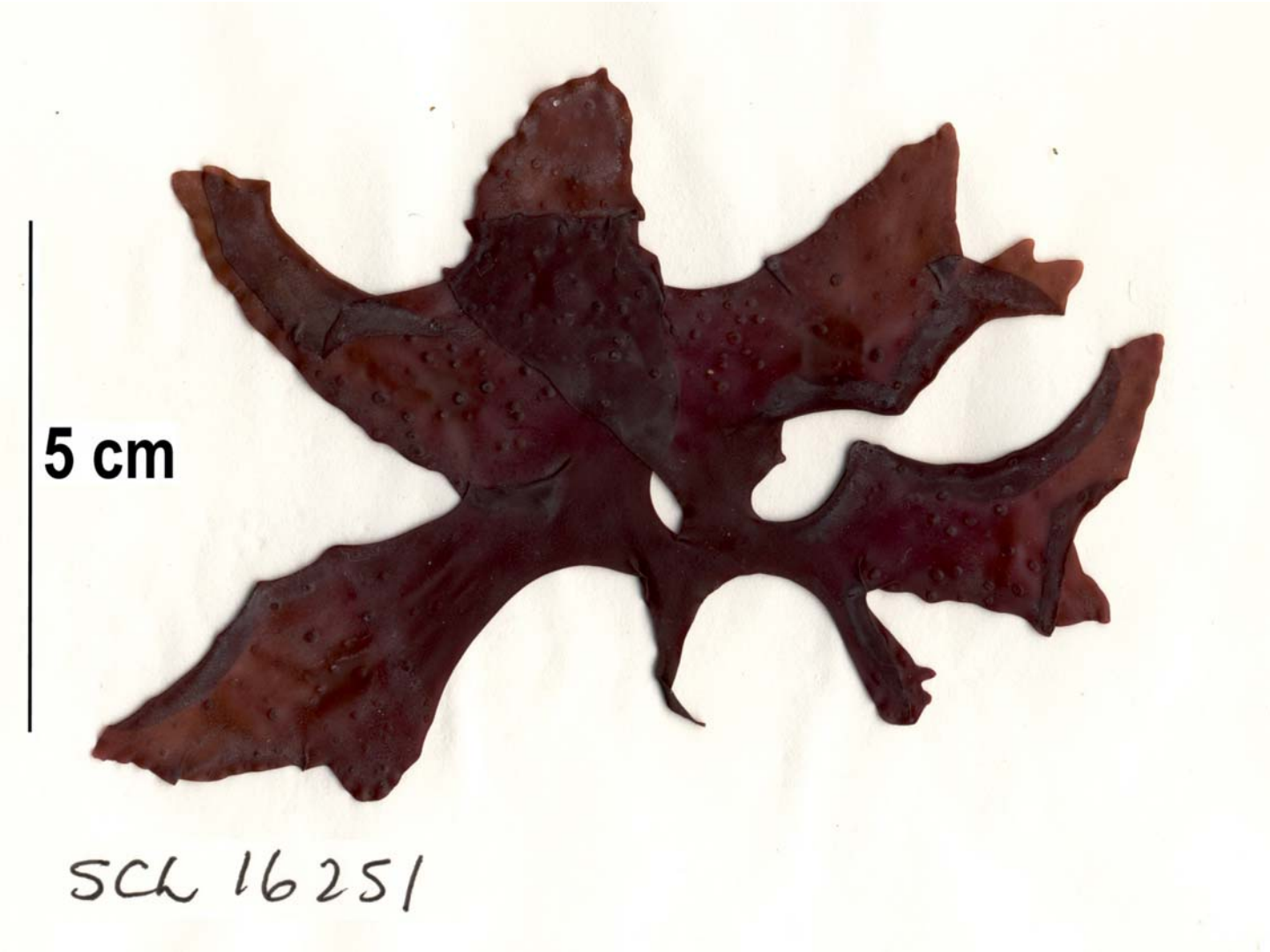
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parvula 002
low intertidal, dark brown kelp bioband; SCL# 16165; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parvula 003
lower mid intertidal, red algae bioband; SCL# 16176; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Mazzaella parvula 004
lower mid intertidal; SCL# 16251B; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parvula 005
mid to upper intertidal, most abundant in rockweed bioband; SCL# 16251; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella parvula 006
cystocarpic, mid intertidal, boulder, rockweed bioband; ML-SS #0032;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 001
low intertidal, rock; SCL# 16110; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 002
low intertidal, rock; SCL# 16110-2; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 003
low intertidal, Alaria and dark brown kelp biobands; SCL# 16222; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 004
cystocarpic, low intertidal, boulder, red algae bioband; ML-SS #0029;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 005
lowintertidal, boulder, red algae bioband; ML-SS #0030;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 006
cystocarpic, low intertidal, boulder, red algae bioband; ML-SS #0031;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

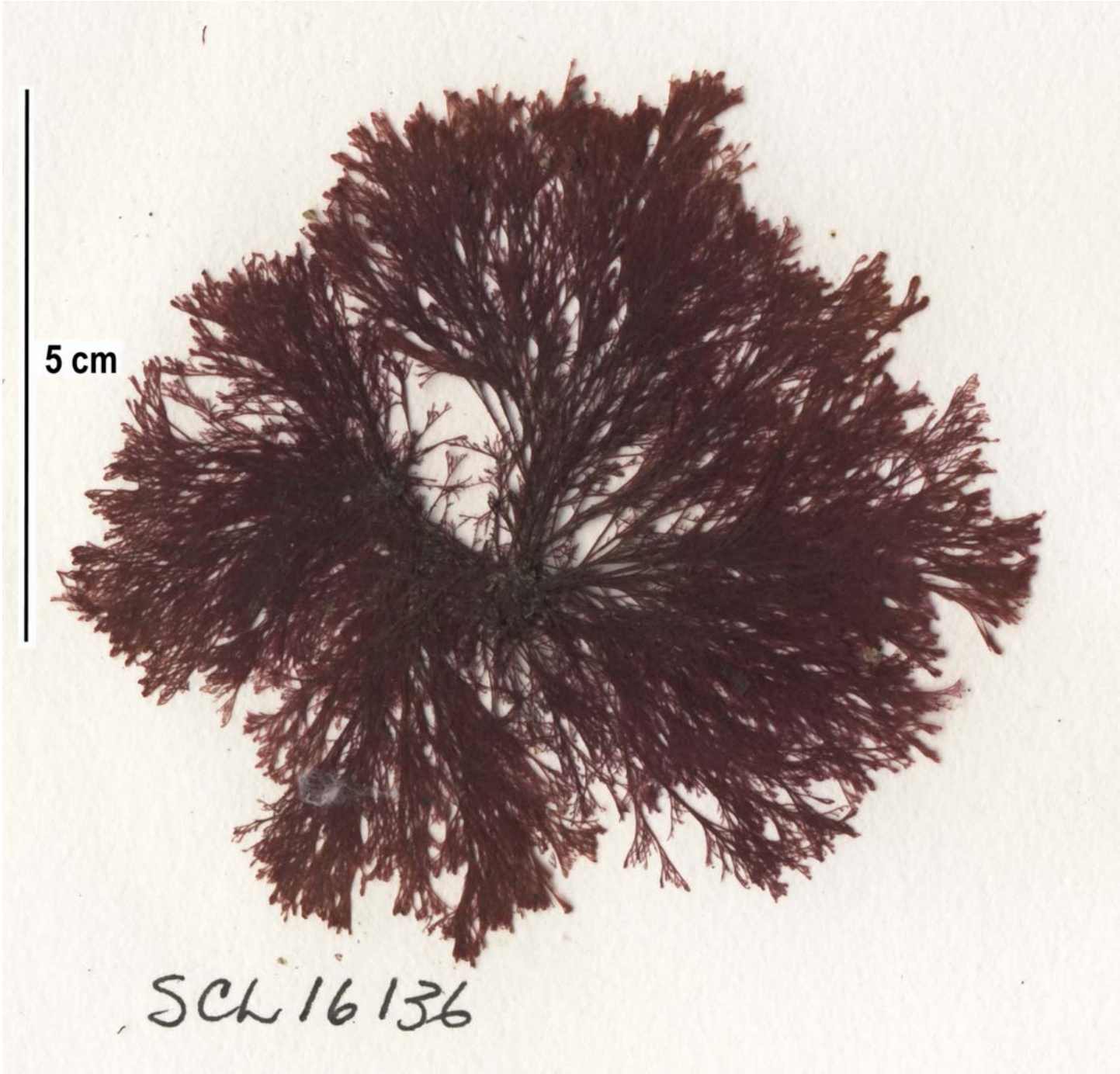
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mazzaella phyllocarpa 007
low intertidal; dark brown kelp bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Membranoptera spinulosa 001
lower mid intertidal, red algae bioband; SCL# 16169; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

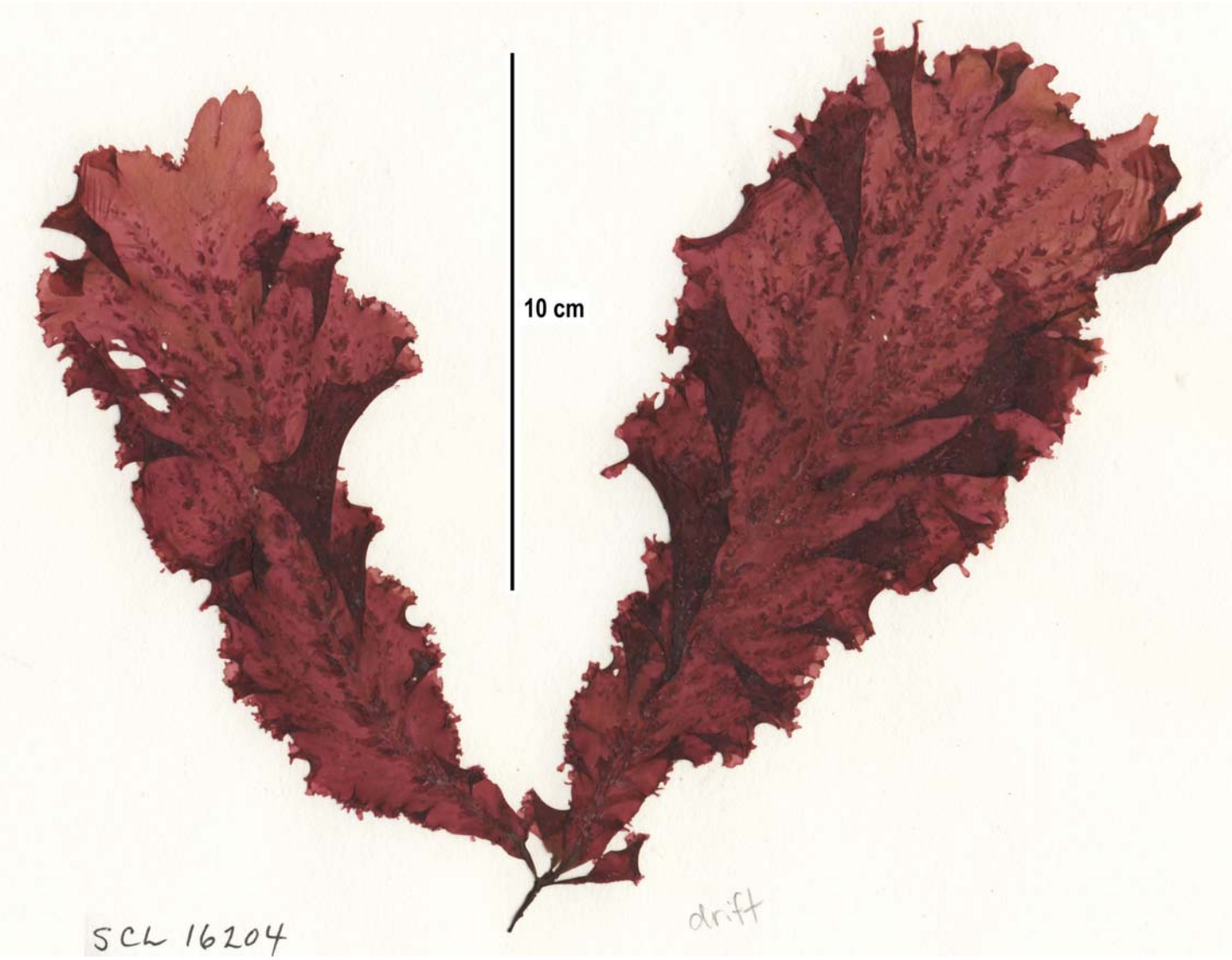


Microcladia borealis 001
mid intertidal tidepool, rockweed bioband; SCL# 16136; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 001
drift; SCL# 16148; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Mikamiella ruprechtiana 002
low intertidal, dark brown kelp bioband; SCL# 16204; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 003
low intertidal, dark brown kelp bioband; SCL# 16211; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 004
drift; SCL# 16253-1; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 005
drift; SCL# 16253-2; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 006
low intertidal, boulder, dark brown kelp bioband; ML-SS #0033;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 007
low intertidal, boulder on rock, Alaria and dark brown kelp biobands; ML-SS #0034;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Mikamiella ruprechtiana 008
low intertidal, rock with boulders, urchin barren bioband; ML-SS #0035;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neopolyporolithon reclinatum 001
epiphytic on Ahnfeltia fastigiata; mid intertidal tidepool; SCL# 16192; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neorhodomela aculeata 001
mid to low intertidal; red algae and soft brown kelp biobands; SCL# 16121; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neorhodomela aculeata 002
low intertidal; red algae and dark brown kelp biobands; SCL# 16174; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neorhodomela aculeata 003
center of quad only, Odonthalia floccosa mixed in periphery; ;
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neorhodomela oregona 001
high intertidal, bedrock, Winter Laver bioband; SCL# 16147; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neorhodomela oregona 002
upper intertidal; barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Neorhodomela oregona 003
upper intertidal; barnacle bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 001
lower intertidal, red algae bioband; SCL# 16091; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 002
low intertidal, boulder, red algae bioband; ML-SS #0041;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 003
epiphytes - Soranthera ulvoidea, diatoms, low intertidal, boulder on rock, Alaria and dark brown kelp biobands;
ML-SS #0043;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 004
ephiphyte Soranthera ulvoidea, low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0044;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 005
ephiphyte Soranthera ulvoidea, low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0045; Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 006
low intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 007
low intertidal; Alaria and dark brown kelp biobands; ;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 008
low intertidal; red algae bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 009
low intertidal; red algae bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa 010
low intertidal; red algae bioband; ;
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa f comosa 001
rockweed bioband; SCL# 16074; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa f comosa 002
epiphytes - Monostroma grevillei, Halosaccion glandiforme, diatoms; mid intertidal, cobble/boulder on rock, red algae bioband; ML-SS #0042;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

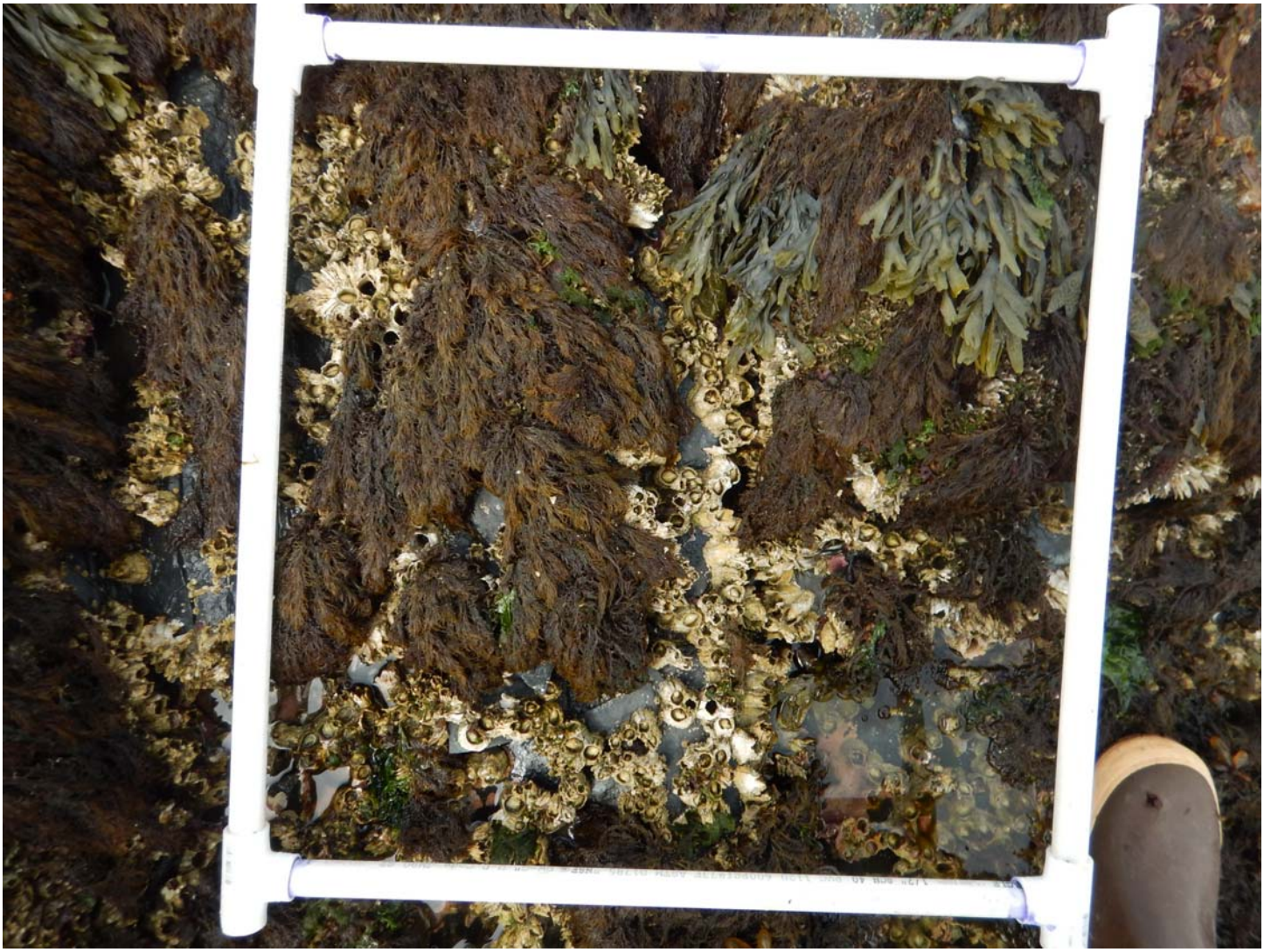
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa f comosa 003
mid intertidal; rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia floccosa f comosa 004
mid intertidal; rockweed bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Odonthalia floccosa f comosa 005
mid intertidal; rockweed bioband; ;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia kamtschatica 001
low intertidal, urchin barrens bioband; SCL# 16189; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia kamtschatica 002
low intertidal, boulder on rock, dark brown kelp bioband; ML-SS #0040;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia kamtschatica 003
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia kamtschatica 004
low intertidal; dark brown kelp bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia setacea 001
drift; SCL# 16208; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia setacea 002
low intertidal, boulder, red algae bioband; ML-SS #0046;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Odonthalia setacea 003
low intertidal, boulder, red algae bioband; ML-SS #0047;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 001
low intertidal; red algae and Alaria biobands; SCL# 16045; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 002
mid intertidal, tidepool; red algae bioband; SCL# 16272; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 003
mid intertidal, boulder on rock, wave cut channel, rockweed bioband; ML-SS #0059;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 004
mid intertidal, boulder on rock, wave cut channel, rockweed bioband; ML-SS #0060;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 005
low intertidal, boulder-cobble-sand, red algae bioband; ML-SS #0061;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 006
mid to low intertidal, rock with boulders, red algae bioband; ML-SS #0062;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 007
mid to low intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 008
mid to low intertidal; red algae bioband; ;
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria hecatensis 009
mid to low intertidal; red algae bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Palmaria sp nov 001
drift; SCL# 16240; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phycodrys fimbriata 001
low intertidal, bedrock; red algae bioband; SCL# 16190; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phycodrys fimbriata 002
low intertidal, boulder, red algae bioband; ML-SS #0065;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

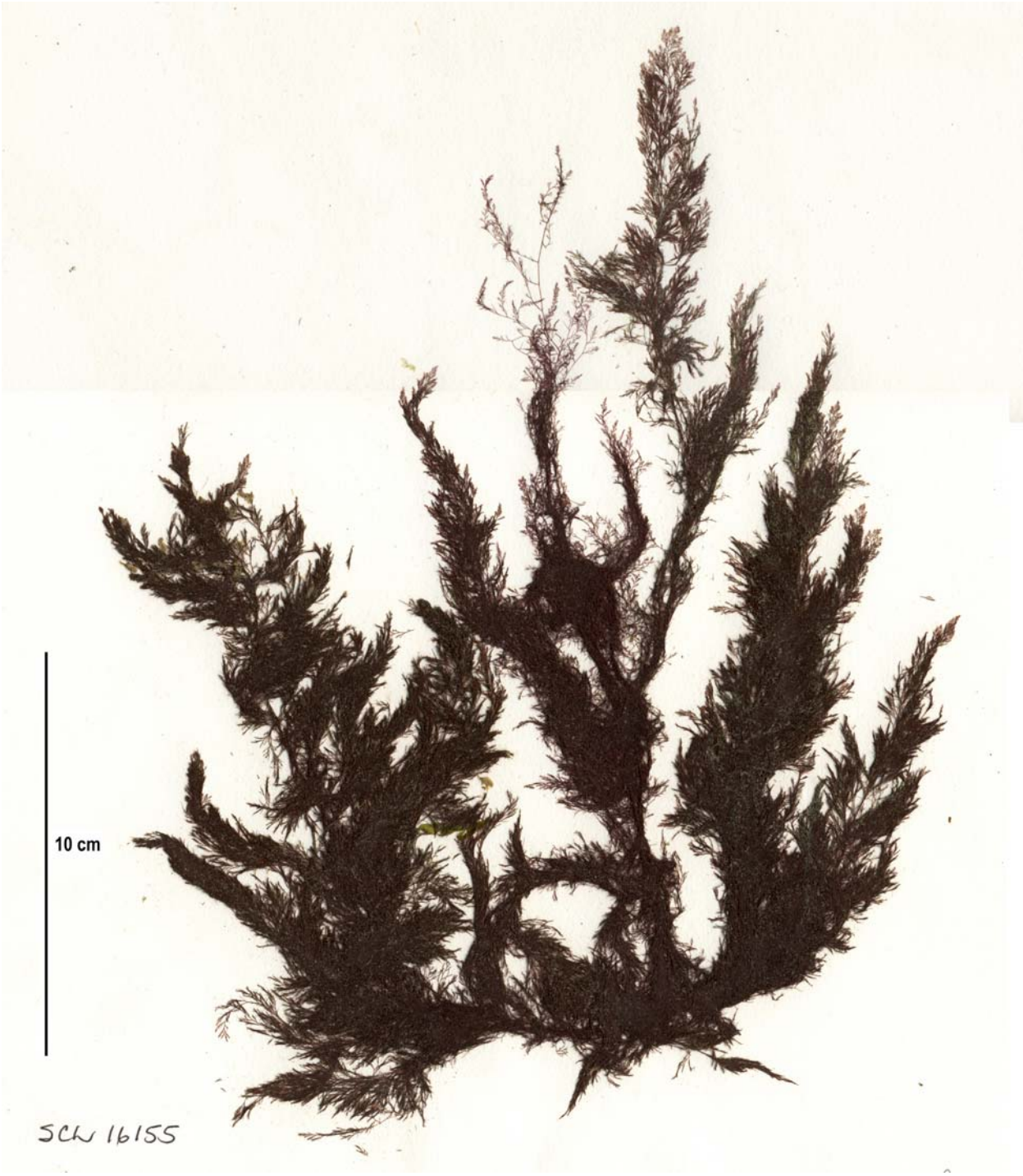
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phycodrys fimbriata 003
low intertidal, boulder, red algae bioband; ML-SS #0066;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 001
green algae bioband; SCL# 16076; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Polyostea bipinnata 002
upper mid to lower mid intertidal, most abundant in red algae bioband; SCL# 16155; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 003
mid intertidal, cobble/boulder on rock, red algae bioband; ML-SS #0068;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 004
mid intertidal, cobble/boulder on rock, red algae bioband; ML-SS #0069;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 005
mid intertidal, cobble/boulder on rock, red algae bioband; ML-SS #0070;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 006
mid to low intertidal, boulder on rock, red algae and dark brown kelp biobands; ML-SS #0071;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 007
low intertidal; red algae bioband; ;
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 008
low intertidal; red algae bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 009
low intertidal; red algae bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 010
low intertidal; red algae bioband; ;
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polyostea bipinnata 011
low intertidal; red algae bioband; ;
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

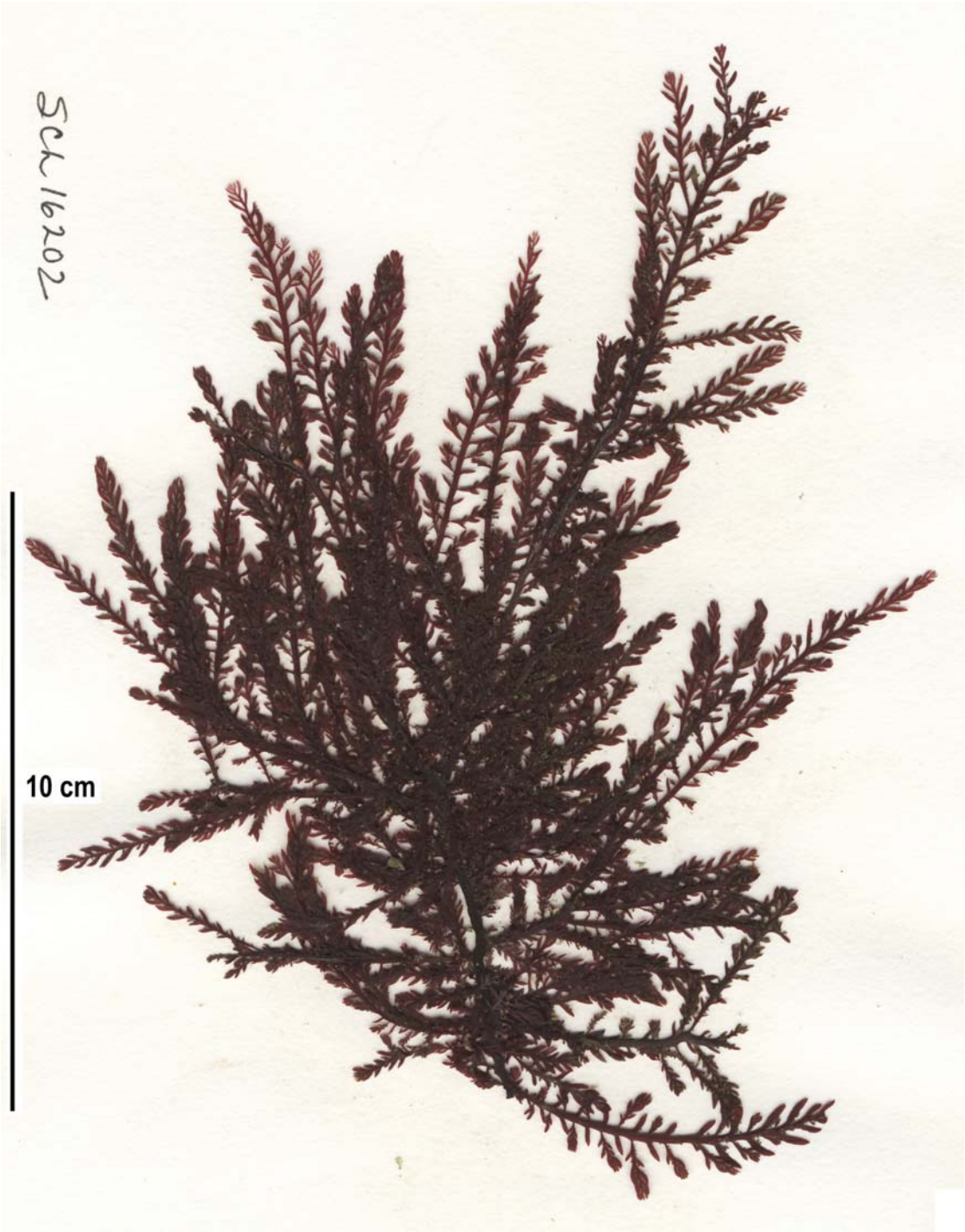
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polysiphonia 001
lower intertidal, red algae bioband; SCL# 16096; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Polysiphonia senticulosa 001
lower mid intertidal, red algae bioband; SCL# 16156; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Ptilota asplenioides 001
low intertidal, dark brown kelp bioband; SCL# 16202; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

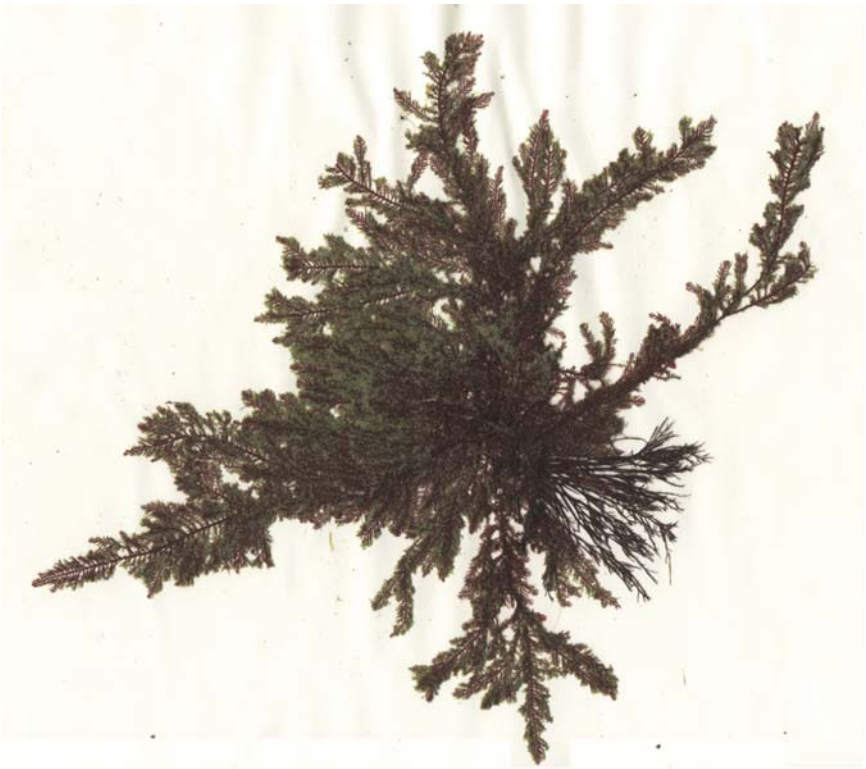
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota asplenioides 002
bleached red algae bioband; ;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota serrata 001
red algae bioband; SCL# 16137; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Ptilota serrata 002
low intertidal, Alaria bioband; SCL# 16220; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota serrata 003
low intertidal, boulder, dark brown kelp bioband; ML-SS #0036;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota serrata 004
low intertidal, boulder, dark brown kelp bioband; ML-SS #0037;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota serrata 005
low intertidal, boulder dark on rock, dark brown kelp bioband; ML-SS #0038;
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota serrata 006
low intertidal; red algae bioband; ;
Sutwik Island, May 8, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Ptilota serrata 007
low intertidal; red algae bioband; ;
Sutwik Island, May 9, 2016; AKP16_008; N56.5765 W157.23237

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia 001
Rockweed bioband; ;
North of Takli Island, Russian Anchorage, May 12, 2016; AKP16_011; N58.07936 W154.46570

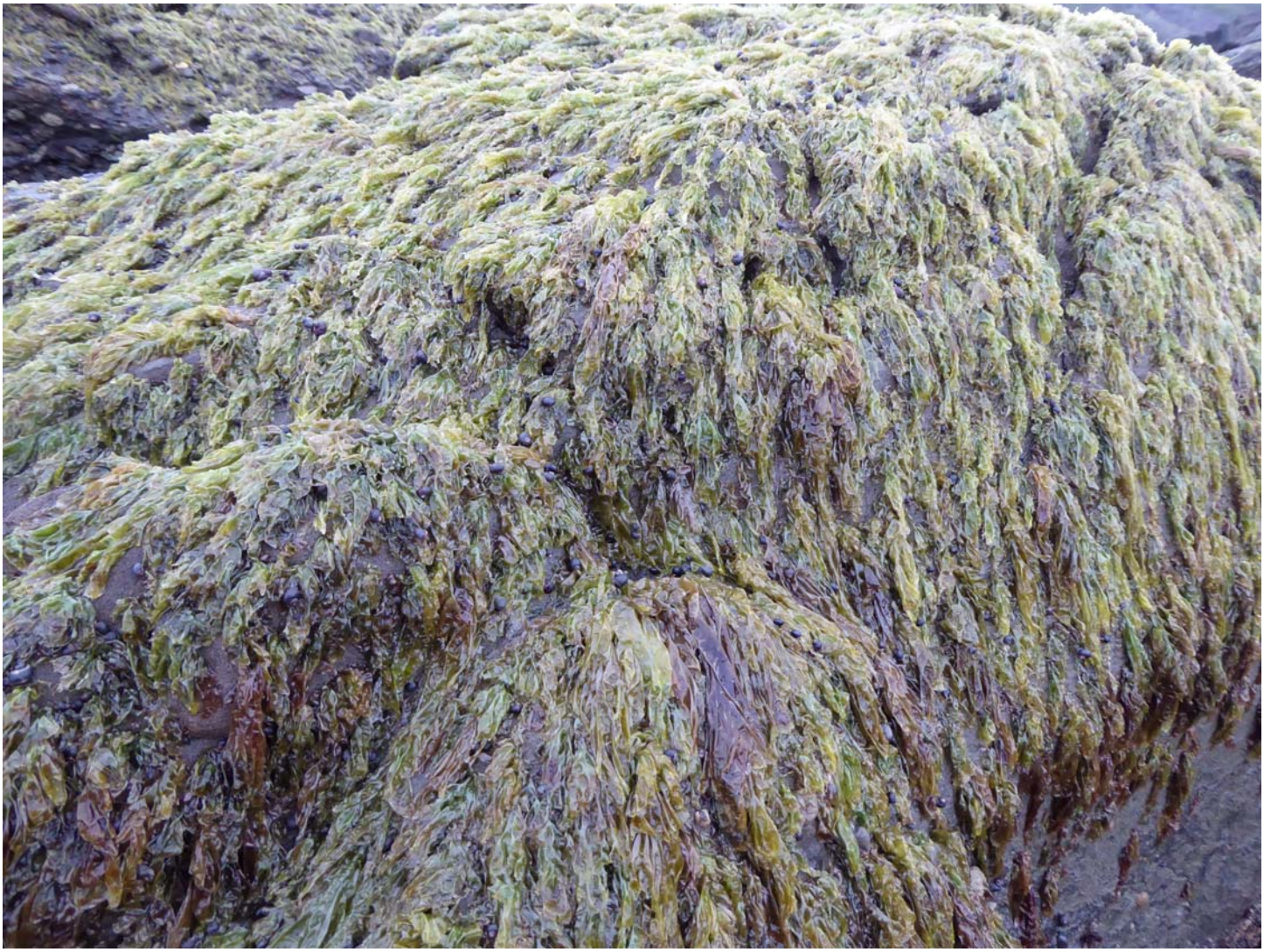
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia 002
Winter Laver bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia 003
rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

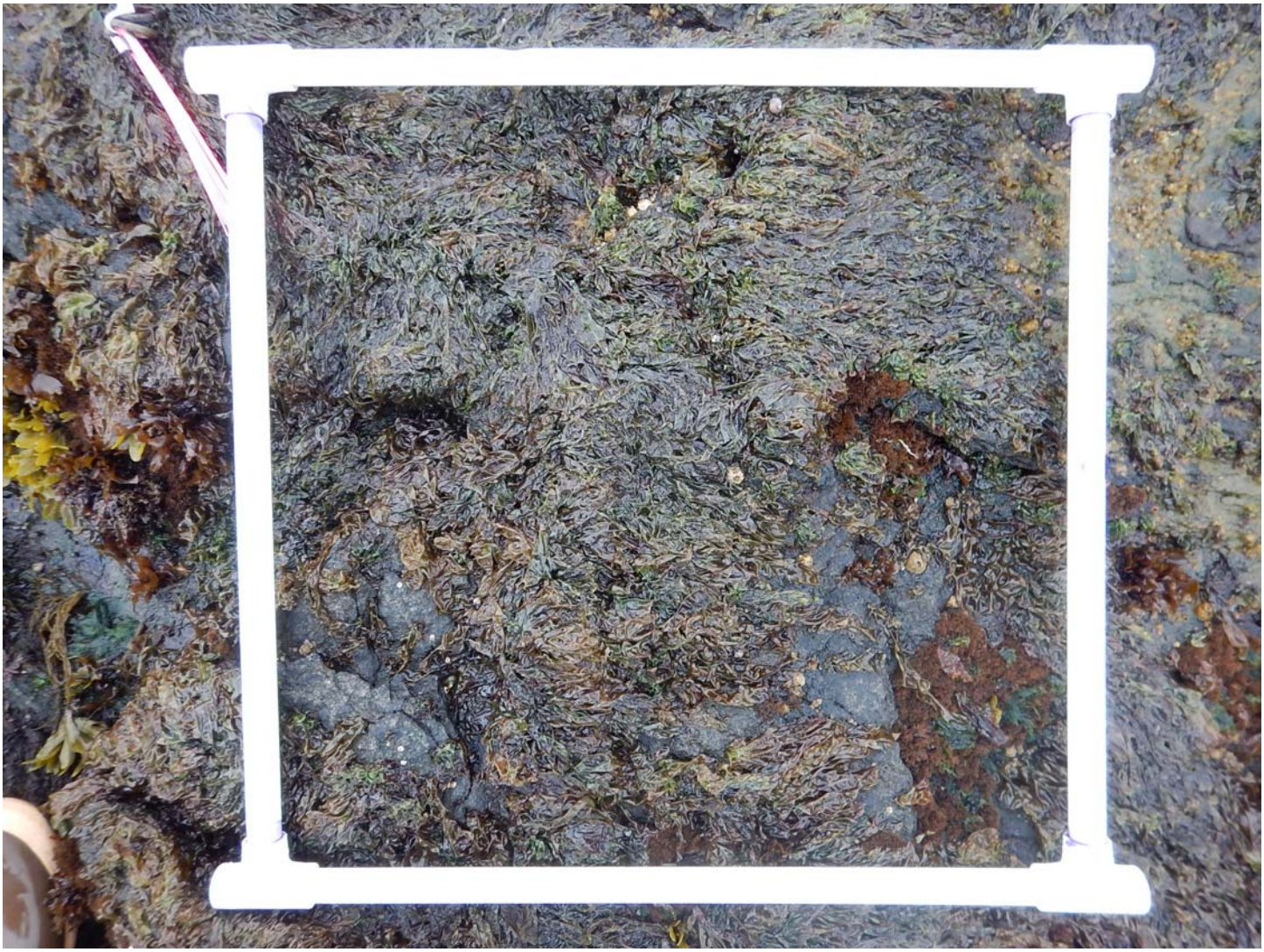


Pyropia 004
Winter Laver bioband; ;
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

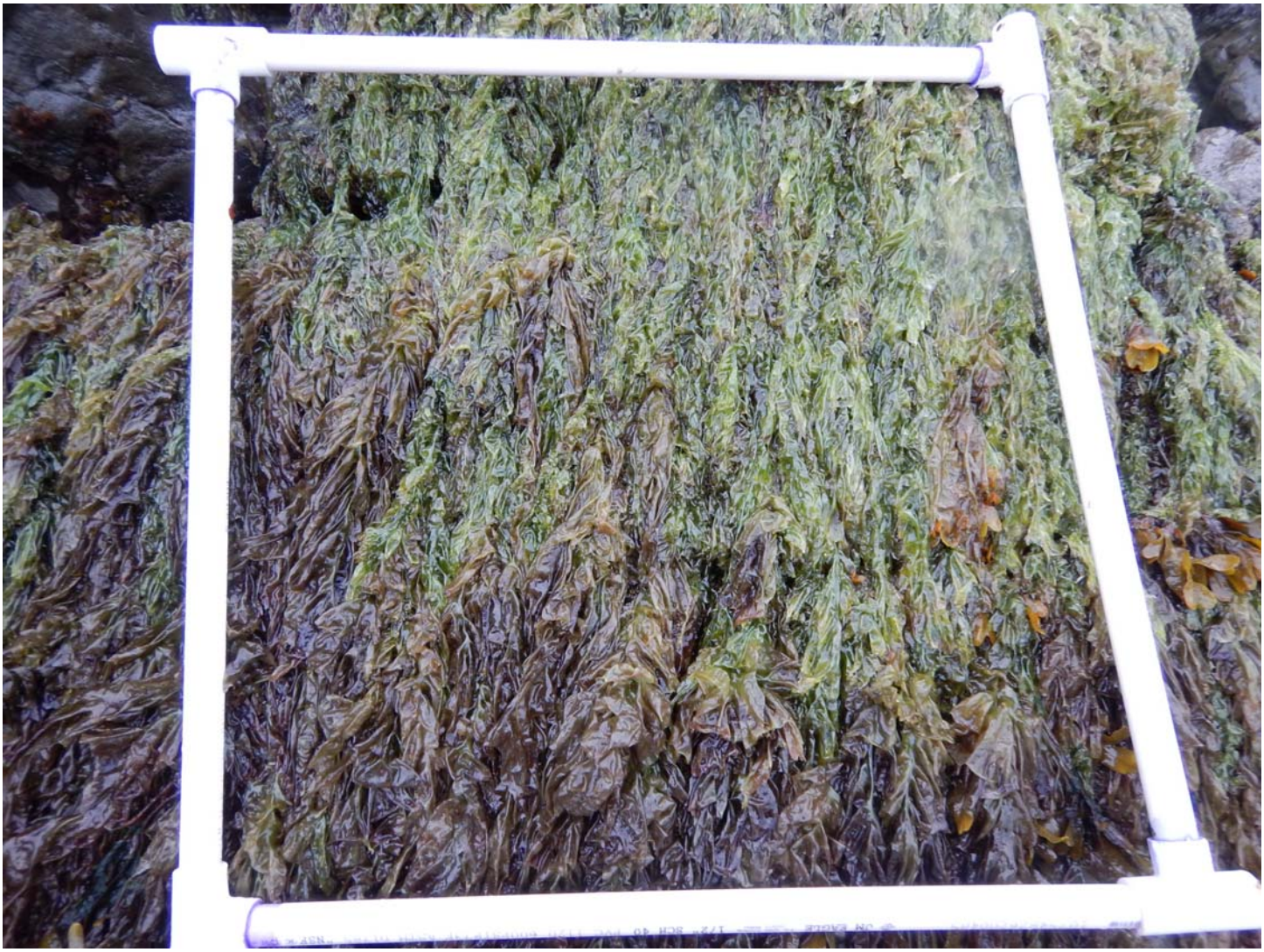
Pyropia 005
barnacle bioband; ;
Port Wrangell, May 10, 2016; AKP16_009; N57.04739 W156.60646

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Pyropia 006
rockweed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

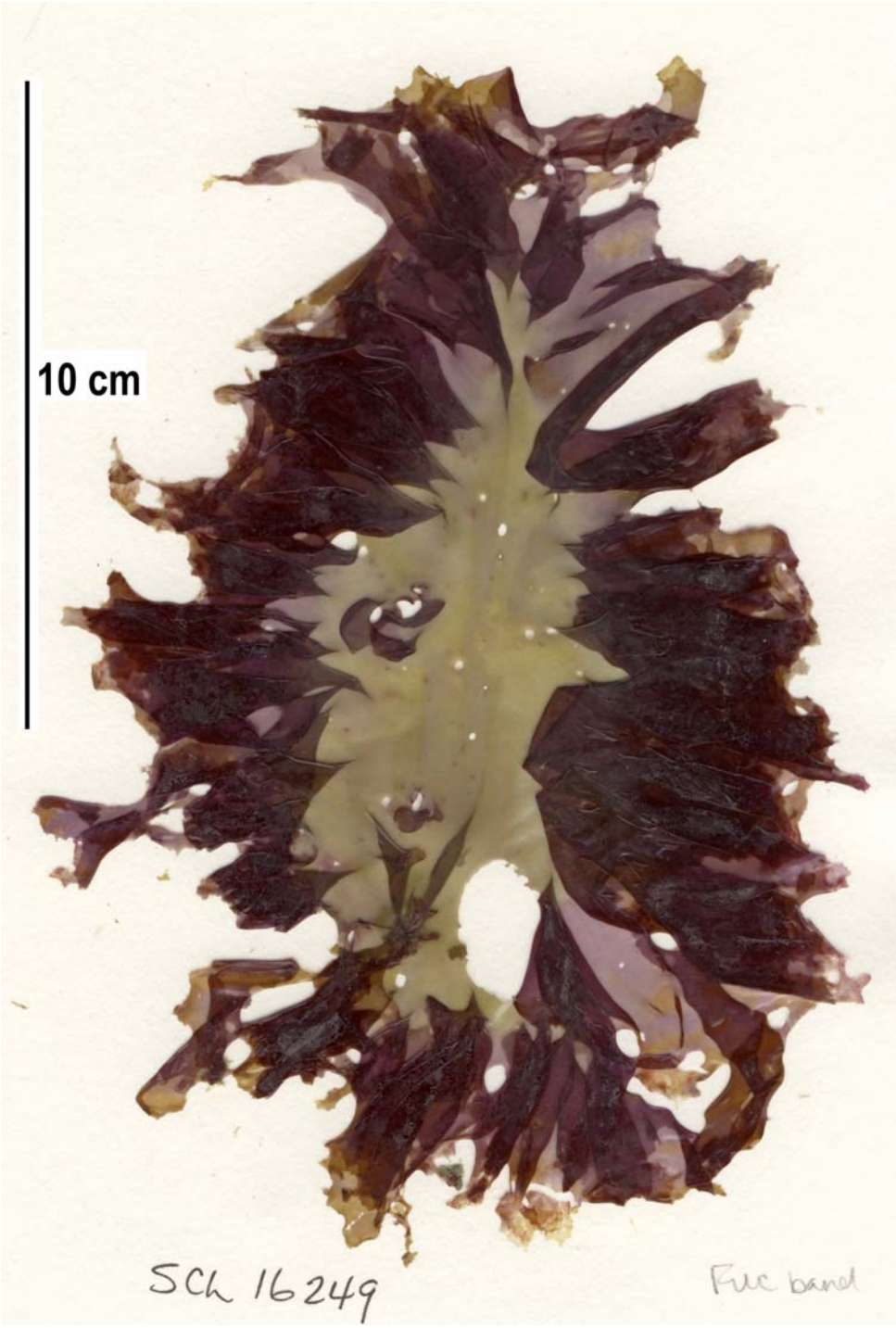


Pyropia 007
Winter Laver bioband; ;
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97478 W158.74128

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia abbottiae 001
mid intertidal; rockweed bioband; SCL# 16088; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Pyropia abbottiae 002
rockweed bioband; SCL# 16249; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia abbottiae 003
mid intertidal, rockweed bioband; SCL# 16259; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia abbottiae 004
mid intertidal, boulder, rockweed bioband; ML-SS #0074;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

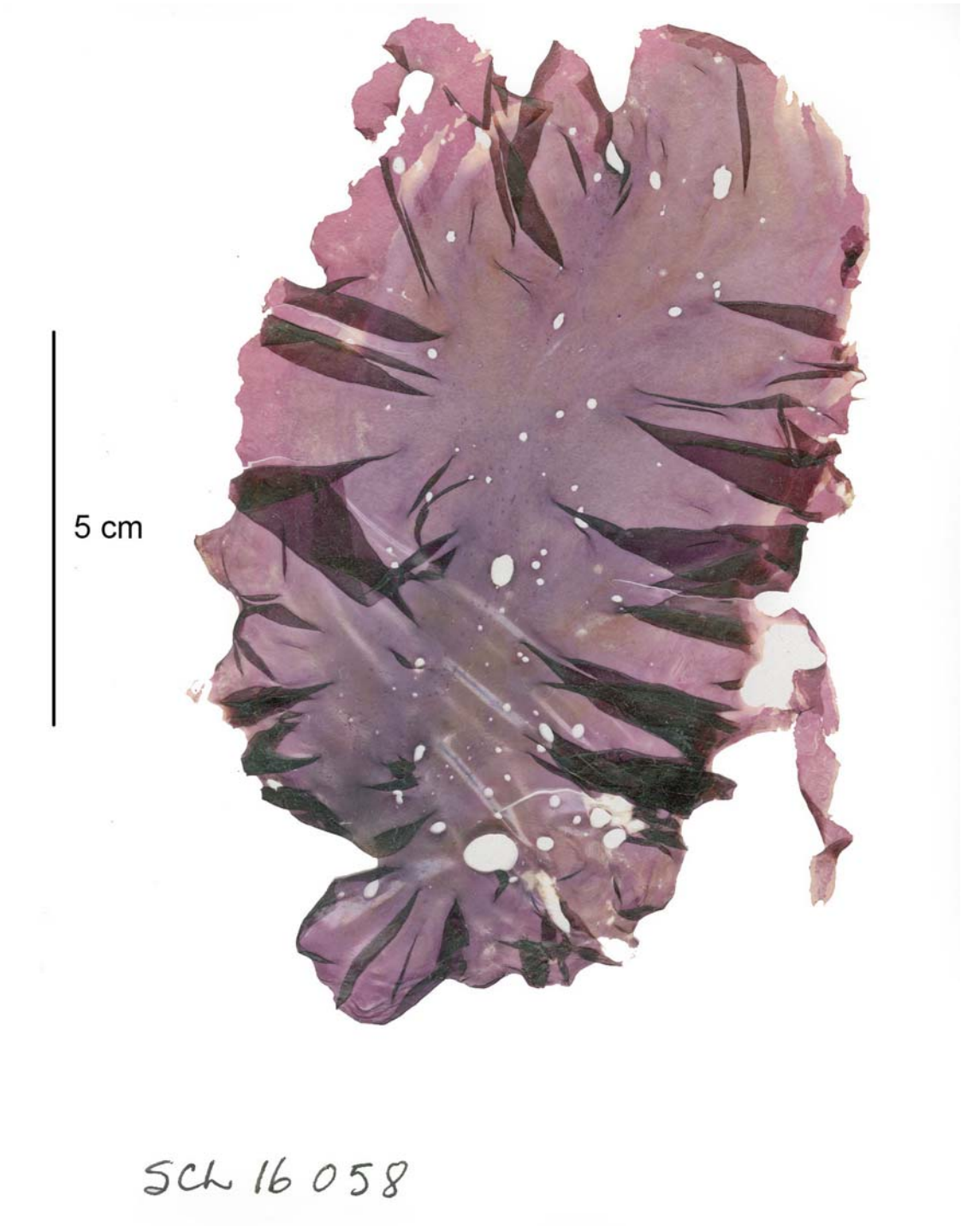
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia abbottiae 005
mid intertidal, boulder on bedrock, rockweed bioband; ML-SS #0075;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

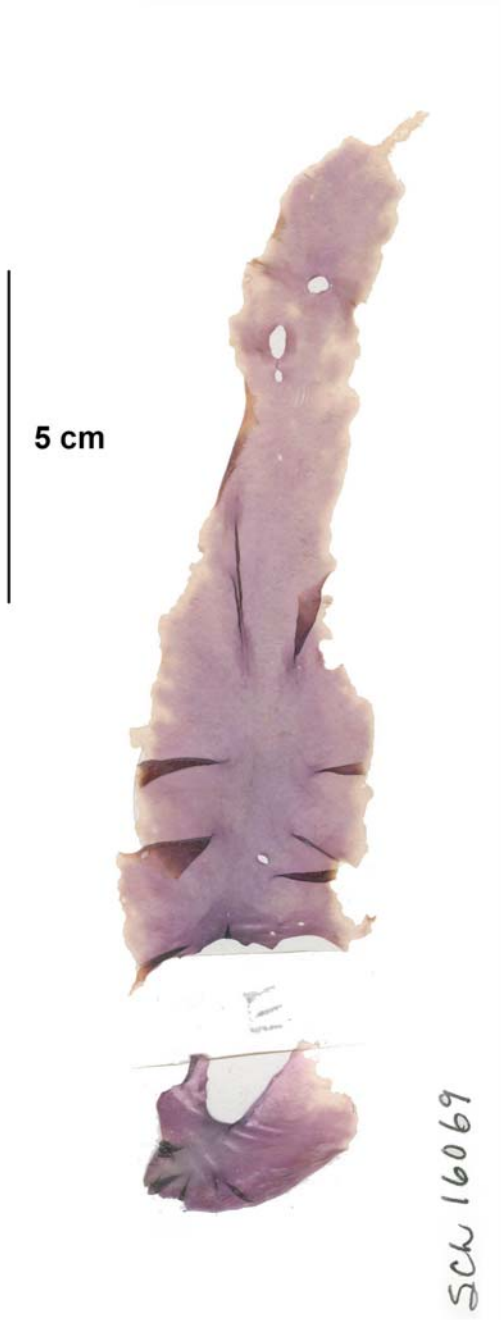
Pyropia fallax 001
mid intertidal, boulder on rock, rockweed bioband; ML-SS #0075;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Pyropia fallax 002
red algae bioband; SCL# 16058; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

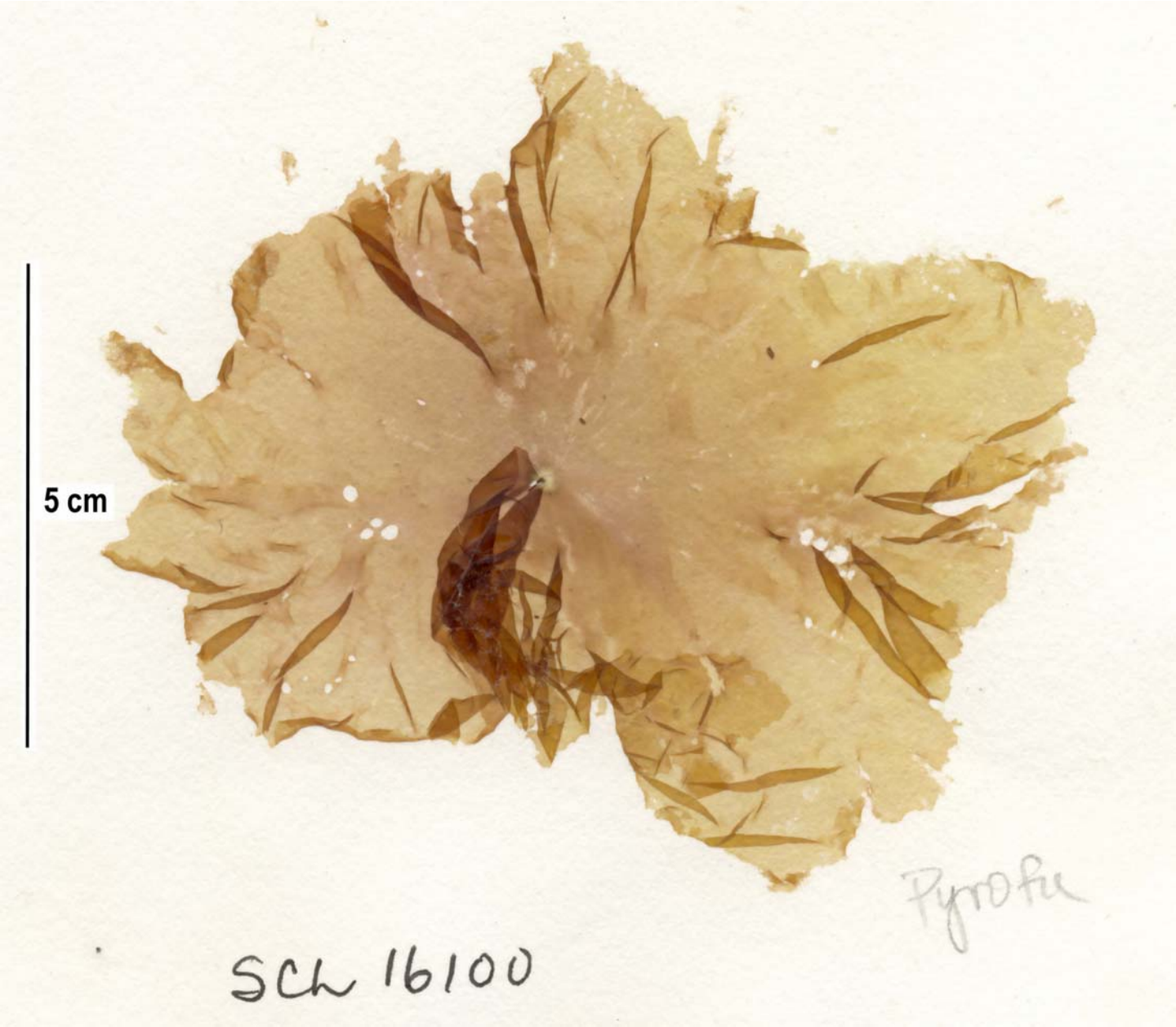


Pyropia fallax 003
red algae bioband; SCL# 16069; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_012; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia fucicola 001
mid intertidal; green algae bioband; SCL# 16079; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

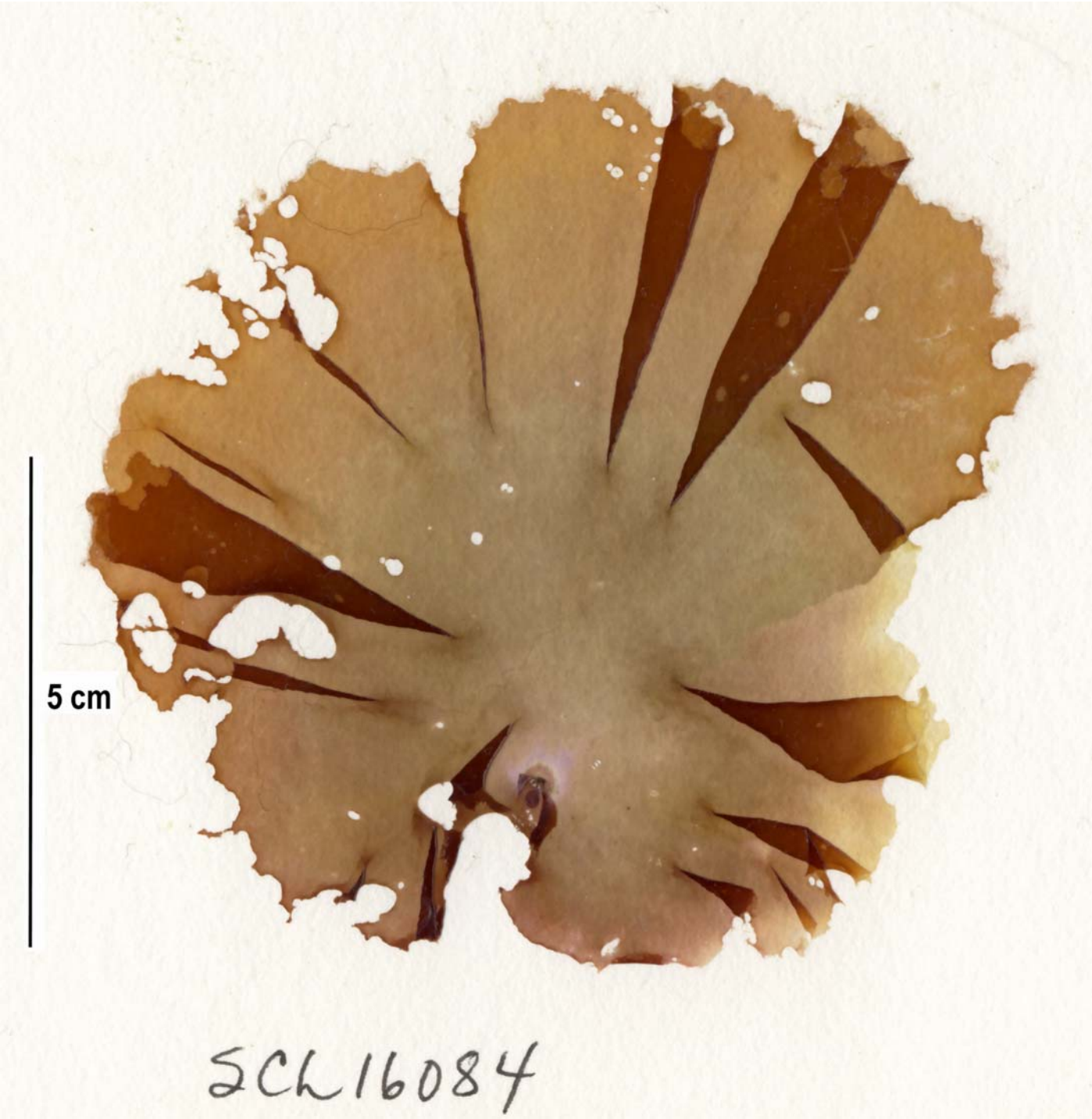


Pyropia fucicola 002
mid intertidal, on Gloiopeltis; SCL# 16100; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia fucicola 003
left of Fucus distichus; rockwed bioband; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

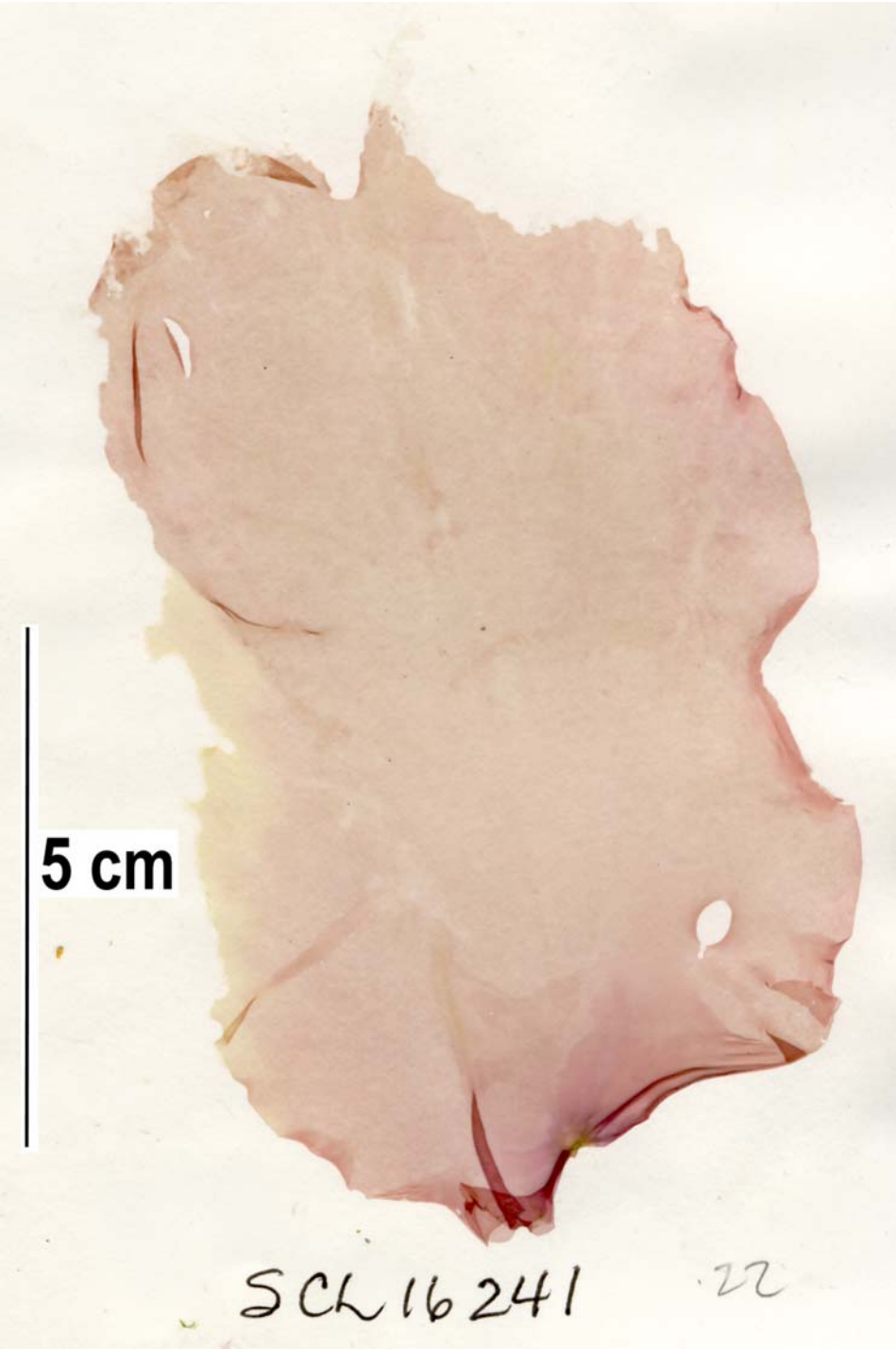


Pyropia kurogii 001
lower mid interidal; green algae bioband; SCL# 16084; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia kurogii 002
mid intertidal, rockweed bioband on Mytilus; SCL# 16093; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Pyropia kurogii 003
upper mid intertidal, barnacle bioband; SCL# 16241; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia kurogii 004
on Cryptosiphonia woodii, upper intertidal, boulder, green algae bioband; ML-SS #0072;
Derickson Is., Chiginigak Bay, May 26, 2016; AKP16_027; N56.99164 W156.72442

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia nereocystis 001
drift; SCL# 16266; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia pseudolanceolata 001
high intertidal bedrock Winter Laver bioband; SCL# 16138; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia pseudolanceolata 002
high intertidal; Winter Laver bioband; SCL# 16205; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia pseudolanceolata 003
high intertidal, large boulder on rock, bare bioband; ML-SS #0073-1;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

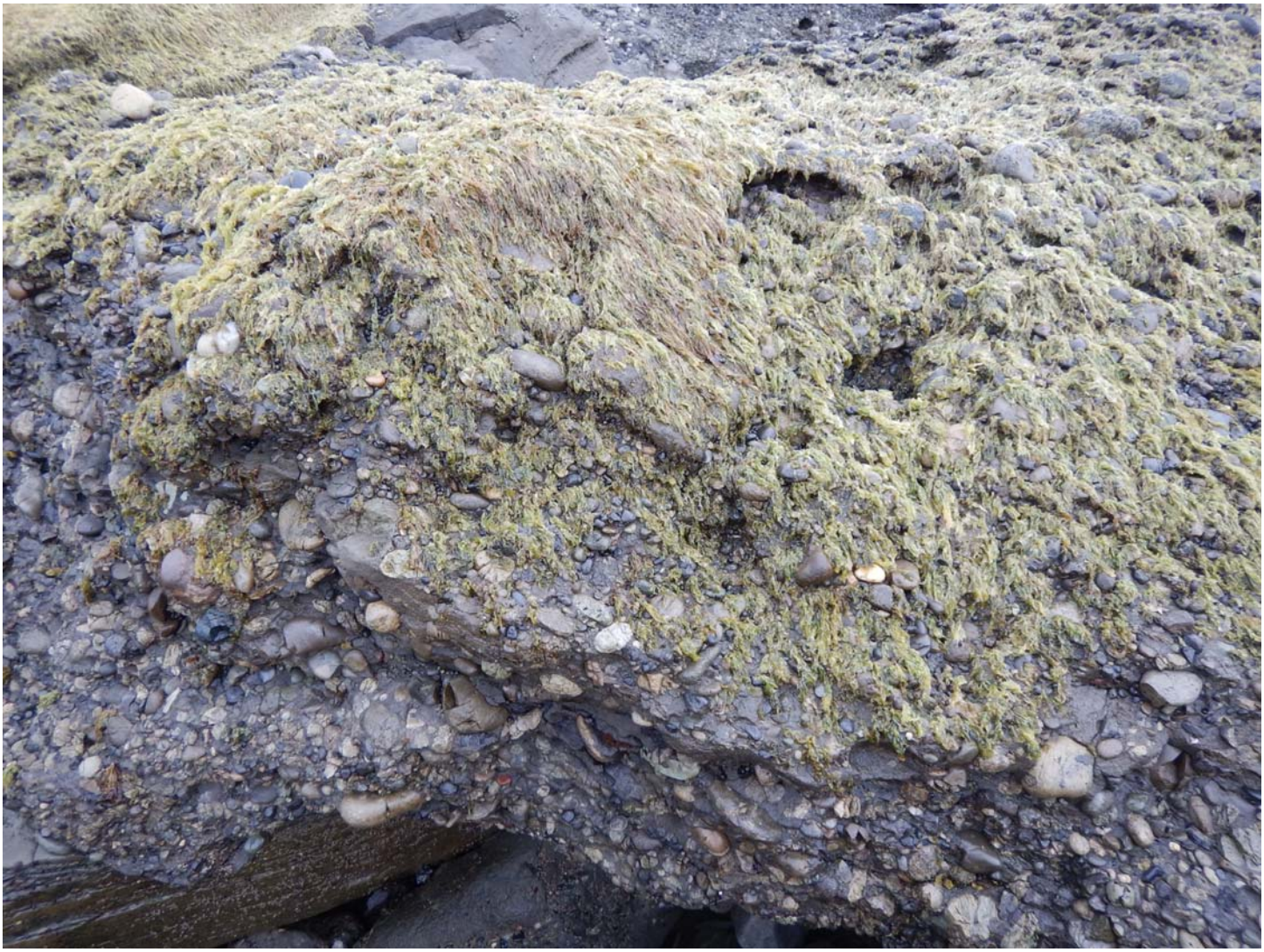
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia pseudolanceolata 004
high intertidal; Winter Laver bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia pseudolanceolata 005
high intertidal; Winter Laver bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Pyropia pseudolanceolata 006
high intertidal; Winter Laver bioband; ;
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia pseudolanceolata 007
high intertidal; Winter Laver bioband; ;
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

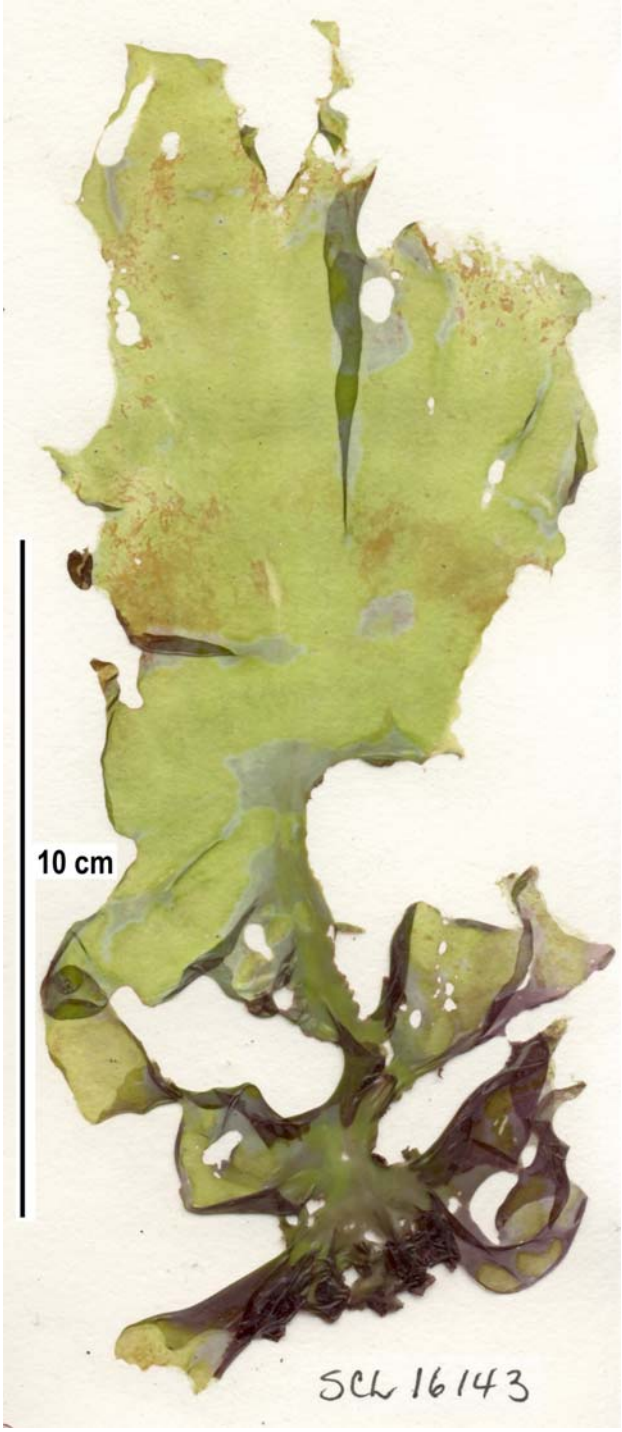
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia taeniata 001
low intertidal; green algae bioband; SCL# 16085; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia taeniata 002
draping over edge of boulder; lower intertidal; red algae bioband; ;
Islet north of Slaughter Is., Wide Bay, May 4, 2016; AKP16_001; N57.34386 W156.30667

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Pyropia torta 001
high intertidal, bedrock, Winter Laver bioband; SCL# 16143; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia torta 002
high intertidal, most abundant in bare bioband; SCL# 16257; UBC Herbarium
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_023; N56.75131 W157.36417

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia torta 003
mid to low intertidal, rock ramp, rockweed bioband; ML-SS #0073-2;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

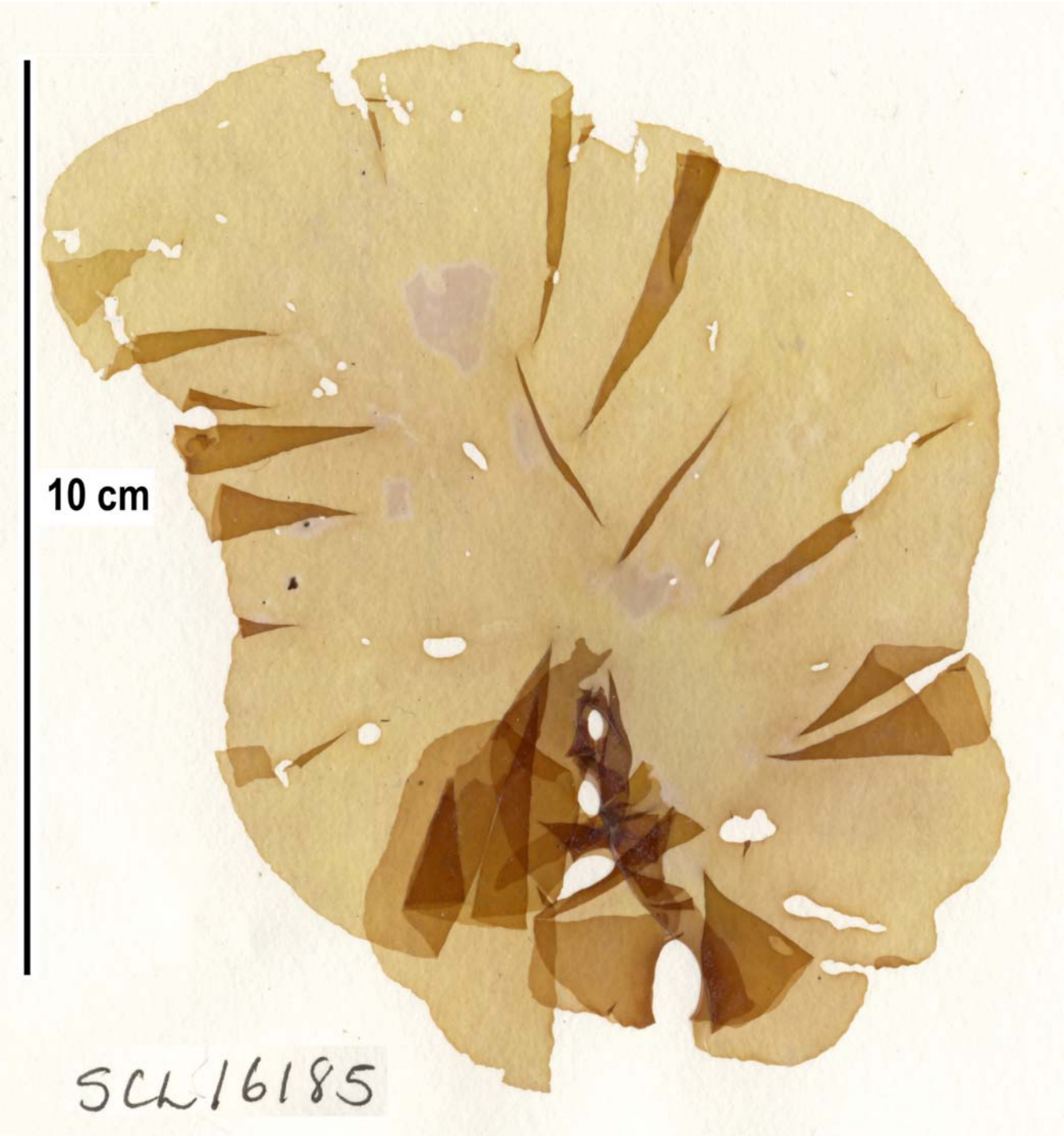
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Pyropia torta 004
Winter Laver bioband; ;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

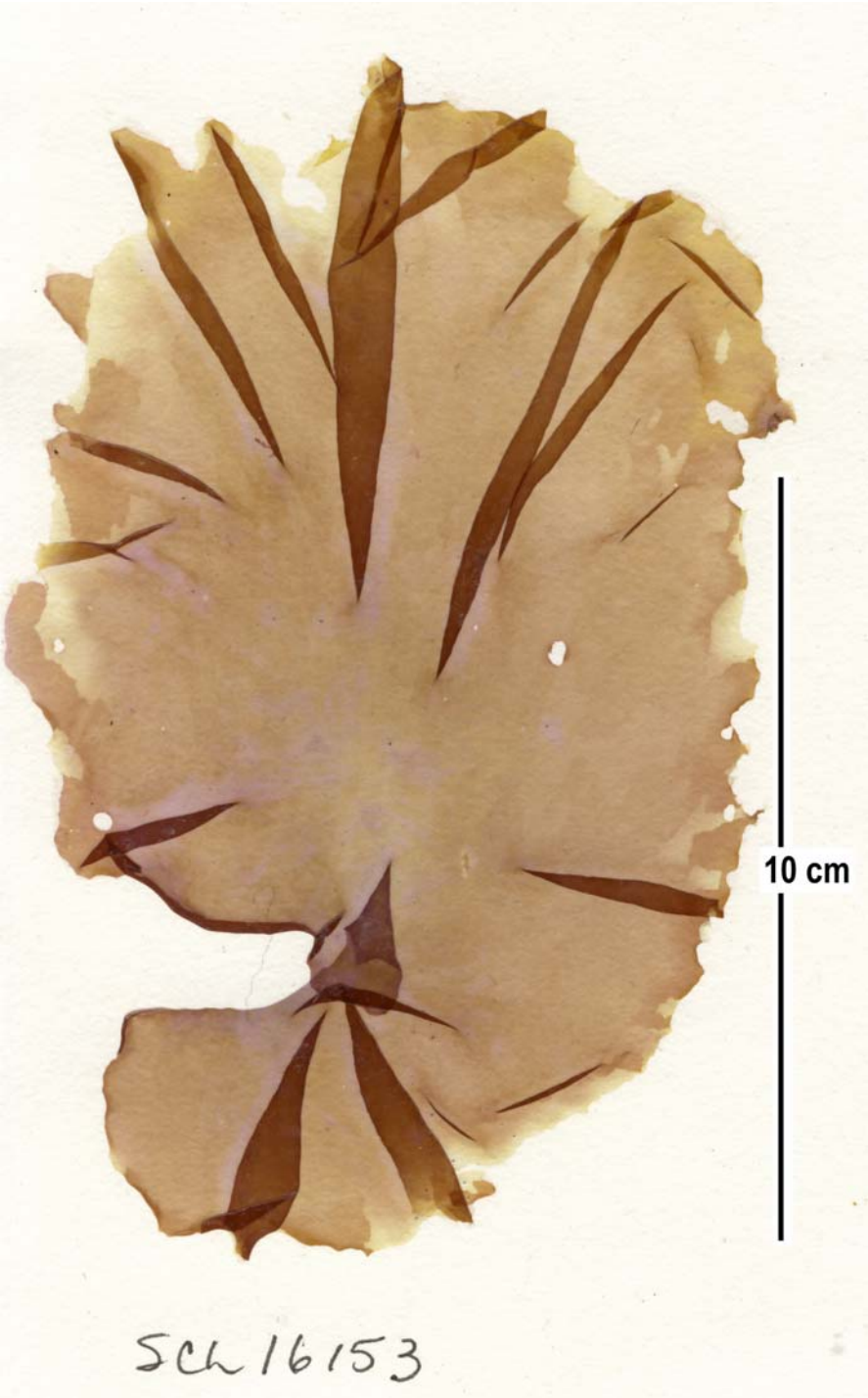
Pyropia unabbottiae 001
high intertidal, bedrock, Porphyra bioband; SCL# 16154; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



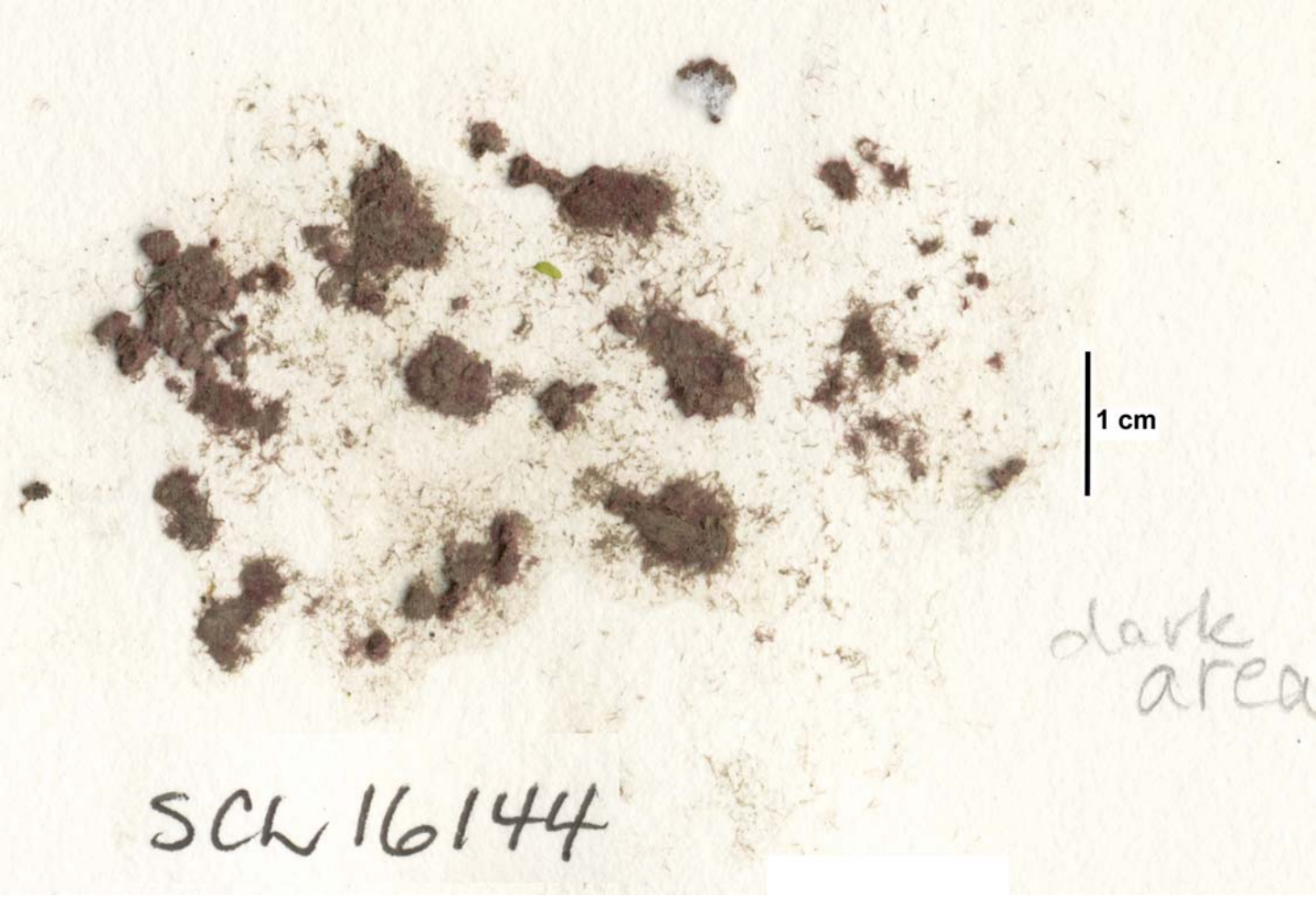
Pyropia unabbottiae 002
high intertidal, bedrock, green algae bioband; SCL# 16185; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



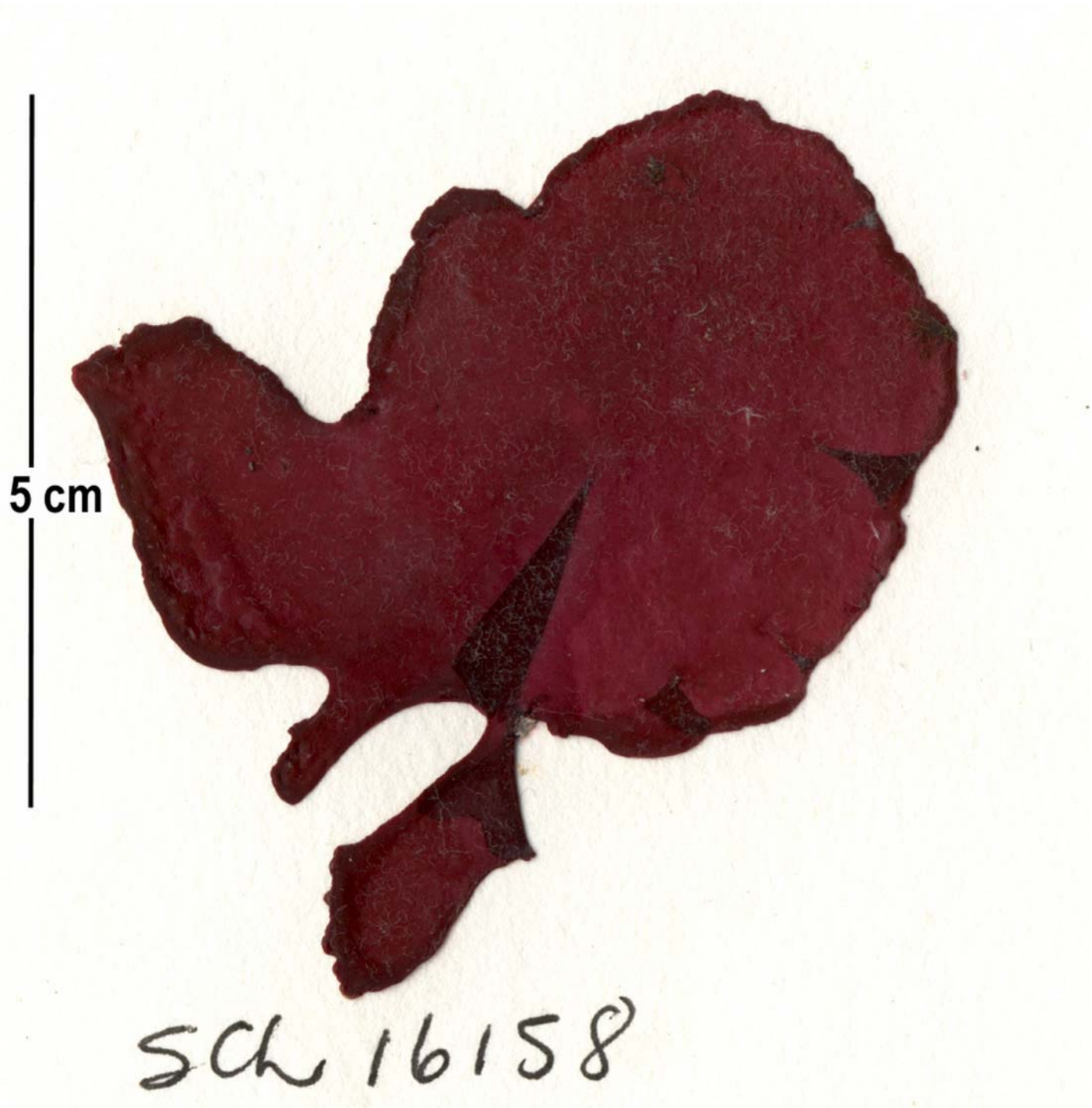
Pyropia unabbottiae 003
mid intertidal, rockweed and red algae biobands; SCL# 16153; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Rhodochorton purpureum 001
mid intertidal, rockweed bioband, dark area; SCL# 16144; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Salishia firma 001
lower mid intertidal, red algae bioband; SCL# 16158; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scagelia occidentale 001
low intertidal, bleached algae red bioband; SCL# 16243; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Scagelia occidentale 002
low intertidal, bleached algae red bioband; SCL# 16244; UBC Herbarium
Kujulik Bay, May 23, 2016; AKP16_022; N56.56994 W157.89736

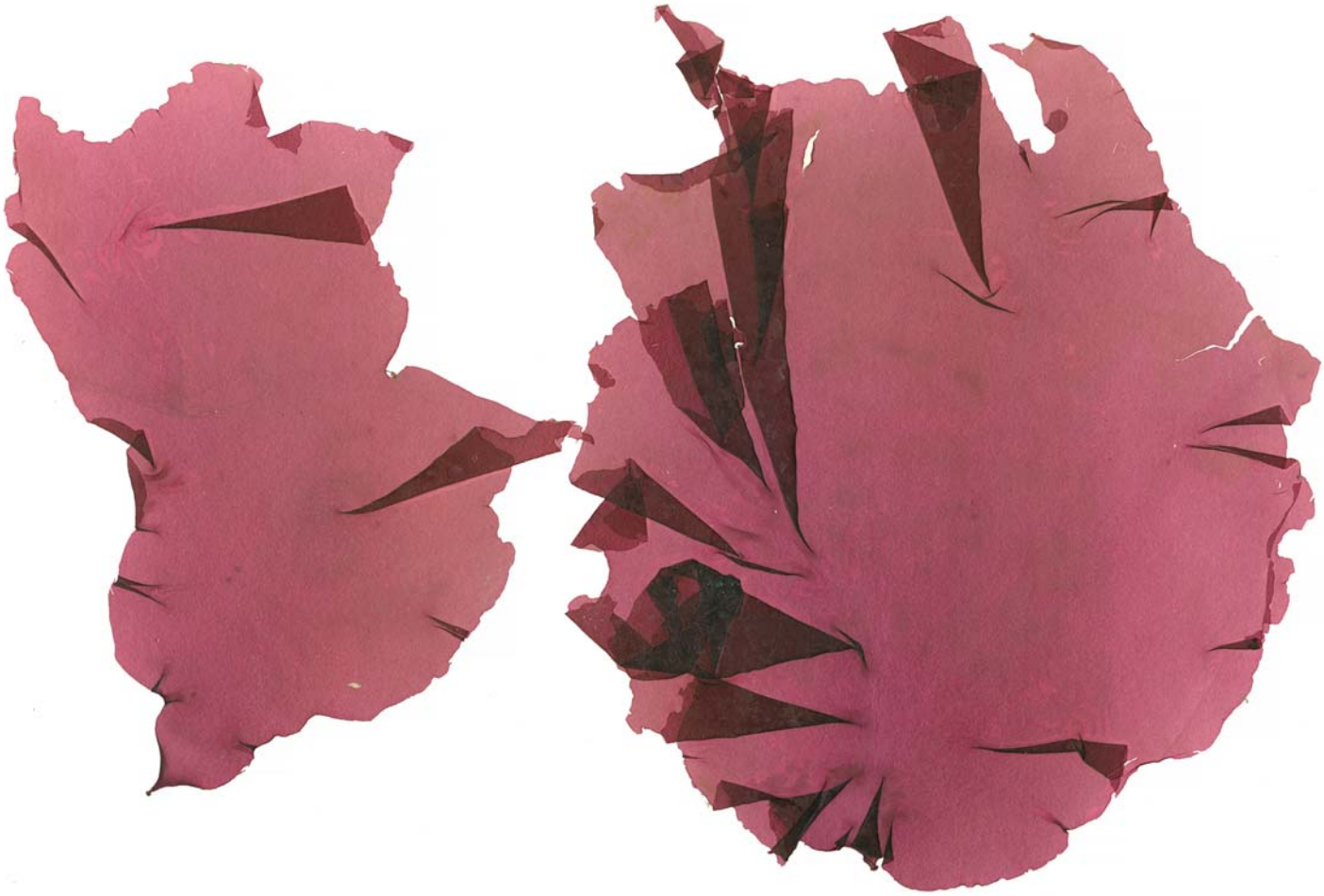
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Schizymenia pacifica 001
lower intertidal tidepool, red algae bioband; SCL# 16149; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_017; N56.26083 W158.24167

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Schizymenia pacifica 002
mid intertidal tidepool, rockweed bioband; SCL# 16162; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Schizymenia pacifica 003
low intertidal, boulder, red algae bioband; ML-SS #0080;
Choweit Island., Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Schizymenia pacifica 004
on boulders; low intertidal; dark brown kelp bioband; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Schizymenia pacifica 005
on boulders; low intertidal; dark brown kelp bioband; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

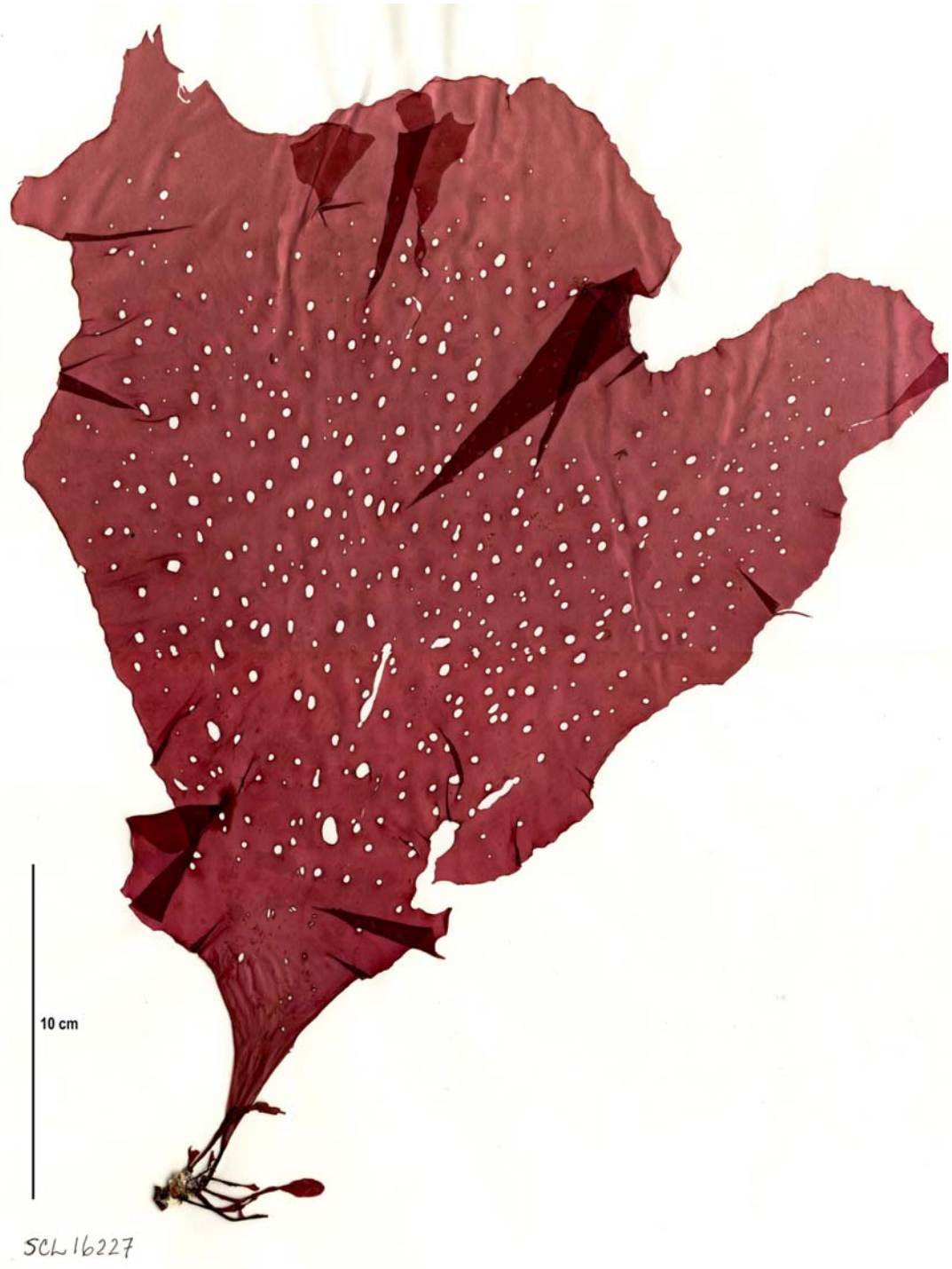
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Schizymenia pacifica 006
on boulders; low intertidal; dark brown kelp bioband; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 001
drift; SCL# 16227-1; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Sparlingia pertusa 002
drift; SCL# 16227-2; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 003
low intertidal, rock, dark brown kelp bioband; ML-SS #0098;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 004
low intertidal, boulder, dark brown kelp bioband; ML-SS #0086;
Nakalilok Bay, May 7, 2016; AKP16_004; N56.92119 W156.93664

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 005
low interitdal, boulder/cobble on rock, bleached red bioband; ML-SS #0087;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 006
low interitdal, boulder/cobble on rock, bleached red bioband; ML-SS #0088;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 007
low interitdal, boulder/cobble on rock, bleached red bioband; ML-SS #0089;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Sparlingia pertusa 008
low intertidal, rock with boulders, urchin barren bioband; ML-SS #0090;
Garden Is., Aniakchak Bay, May 25, 2016; AKP16_024; N56.75 W157.36094

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Tokidadendron bullatum 001
low intertidal, red algae bioband; SCL# 16103; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Tokidadendron bullatum 002
lower mid intertidal, red algae bioband; SCL# 16171; UBC Herbarium
Castle Bay, May 22, 2016; AKP16_018; N56.23346 W158.31236

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Tokidadendron bullatum 003
low mid intertidal, red algae bioband; SCL# 16195; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Tokidadendron bullatum 004
low intertidal, Alaria bioband; SCL# 16213; UBC Herbarium
Eagle Rock, Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_020; N56.32758 W158.39378

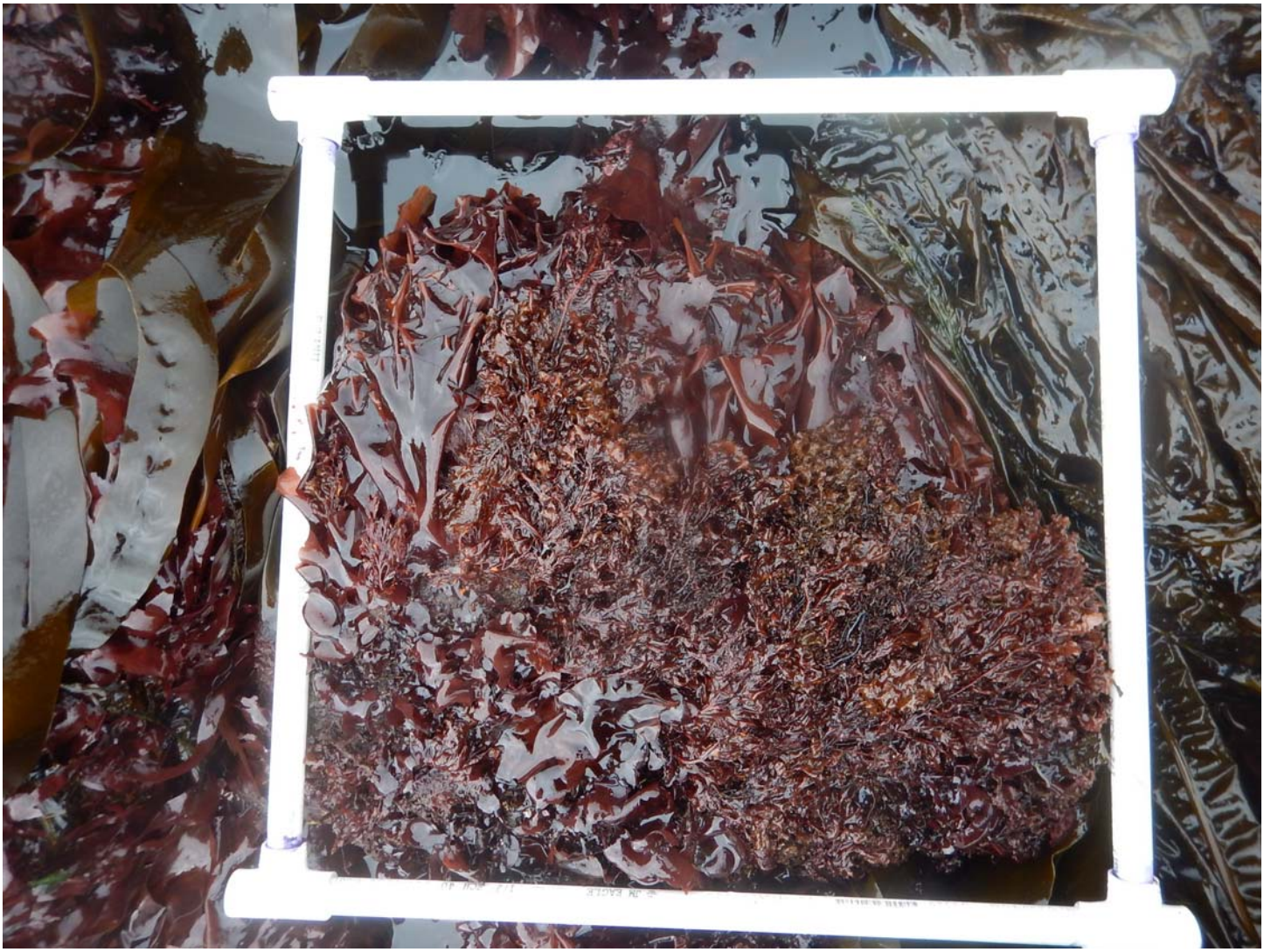
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Tokidadendron bullatum 005
low intertidal, rock, dark brown kelp bioband; ML-SS #0093;
Slaughter Is., Wide Bay, May 6, 2016; AKP16_002; N57.33322 W156.33558

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Tokidadendron bullatum 006
low inertidal, boulder/cobble on rock, bleached red bioband; ML-SS #0094;
Kujulik Bay, May 24, 2016; AKP16_022; N56.56994 W157.89736

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Tokidadendron bullatum 007
low intertidal; dark brown kelp bioband; ;
Choweit Island, Semidi Islands, May 8, 2016; AKP16_006; N56.03626 W156.73961

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Turnerella mertensiana 001
drift; SCL# 16231; UBC Herbarium
Kujulik Bay, May 24, 2016; AKP16_021; N56.64483 W157.85397

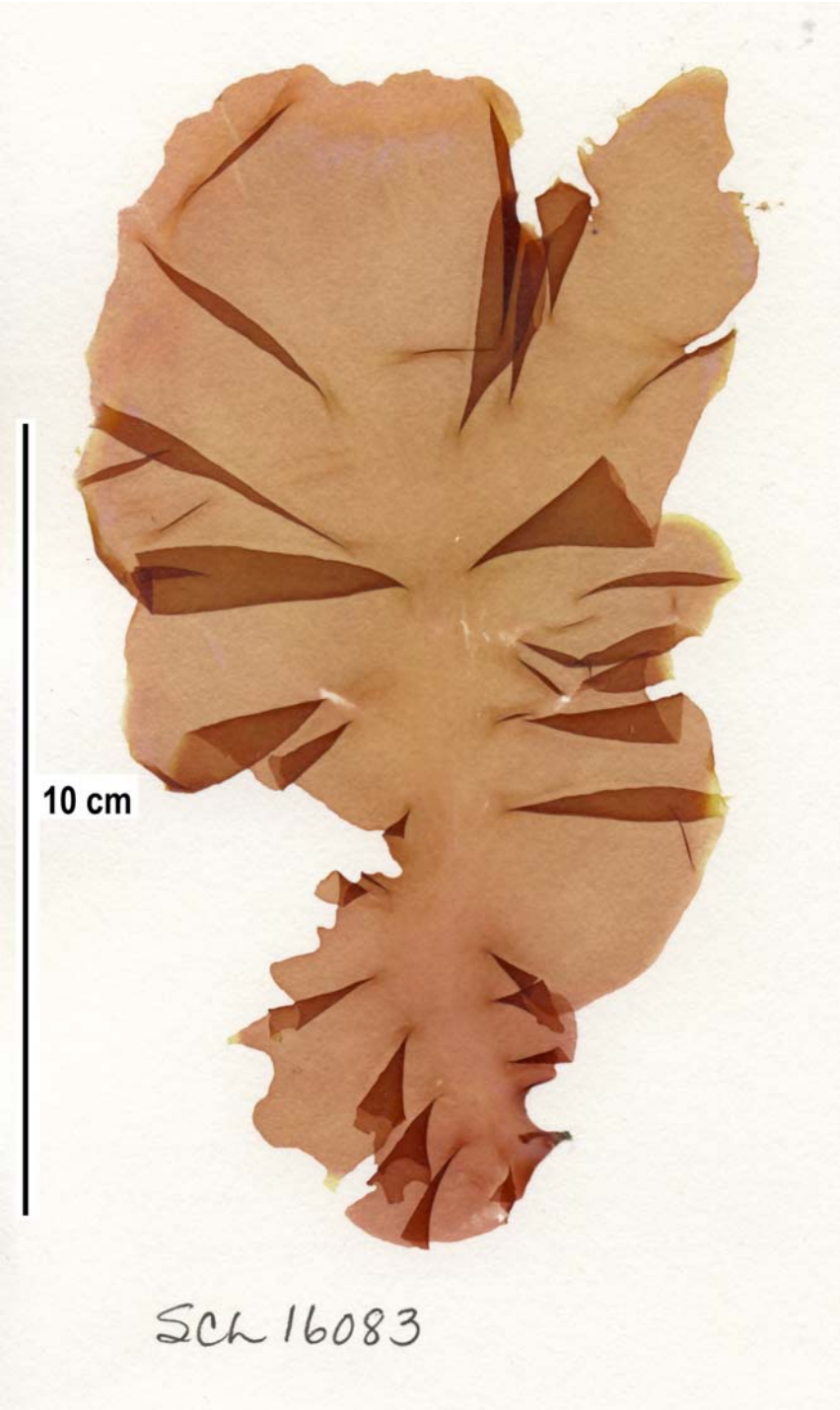
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Wildemania cuneiformis 001
mid intertidal, on Gloiopeltis; rockweed bioband; SCL# 16101; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_014; N56.17456 W158.53375

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Wildemania cuneiformis 002
drift; SCL# 16107; UBC Herbarium
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Wildemania cuneiformis 003
low interidal; green algae bioband; SCL# 16083; UBC Herbarium
Mitrofania Bay, May 20, 2016; AKP16_013; N55.97508 W158.73828

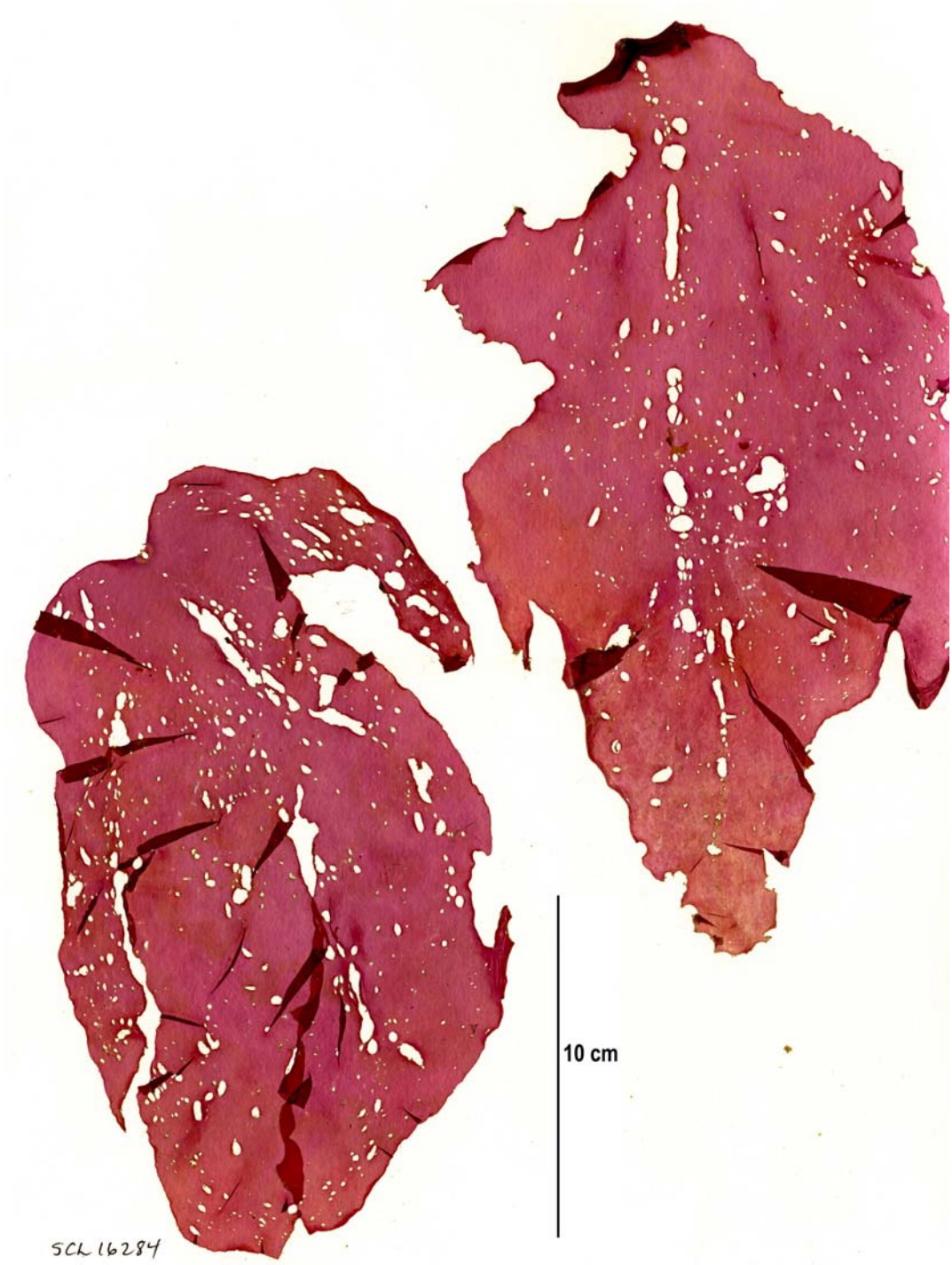
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Wildemania cuneiformis 004
low intertidal; channel with sandy bottom; soft brown kelp bioband; ;
Portage Bay, Kuiutka Bay, May 21, 2016; AKP16_015; N56.17856 W158.51953

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Wildemania cuneiformis 005
low intertidal; channel with sandy bottom; red algae bioband; ;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Wildemania variegata 002
low intertidal, Alaria bioband and Phyllospadix bed; SCL# 16284; UBC Herbarium
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Wildemania variegata 003
mid to low intertidal, cobble-sand-boulder, surfgrass bioband; ML-SS #0096;
Chiginigak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Wildemania variegata 004
epiphytic; low intertidal; channel with sandy bottom; surfgrass bioband; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Digital Catalog of
Benthic Marine Algae
from the Alaska Peninsula

Seagrasses
Anthophyta

May 2016

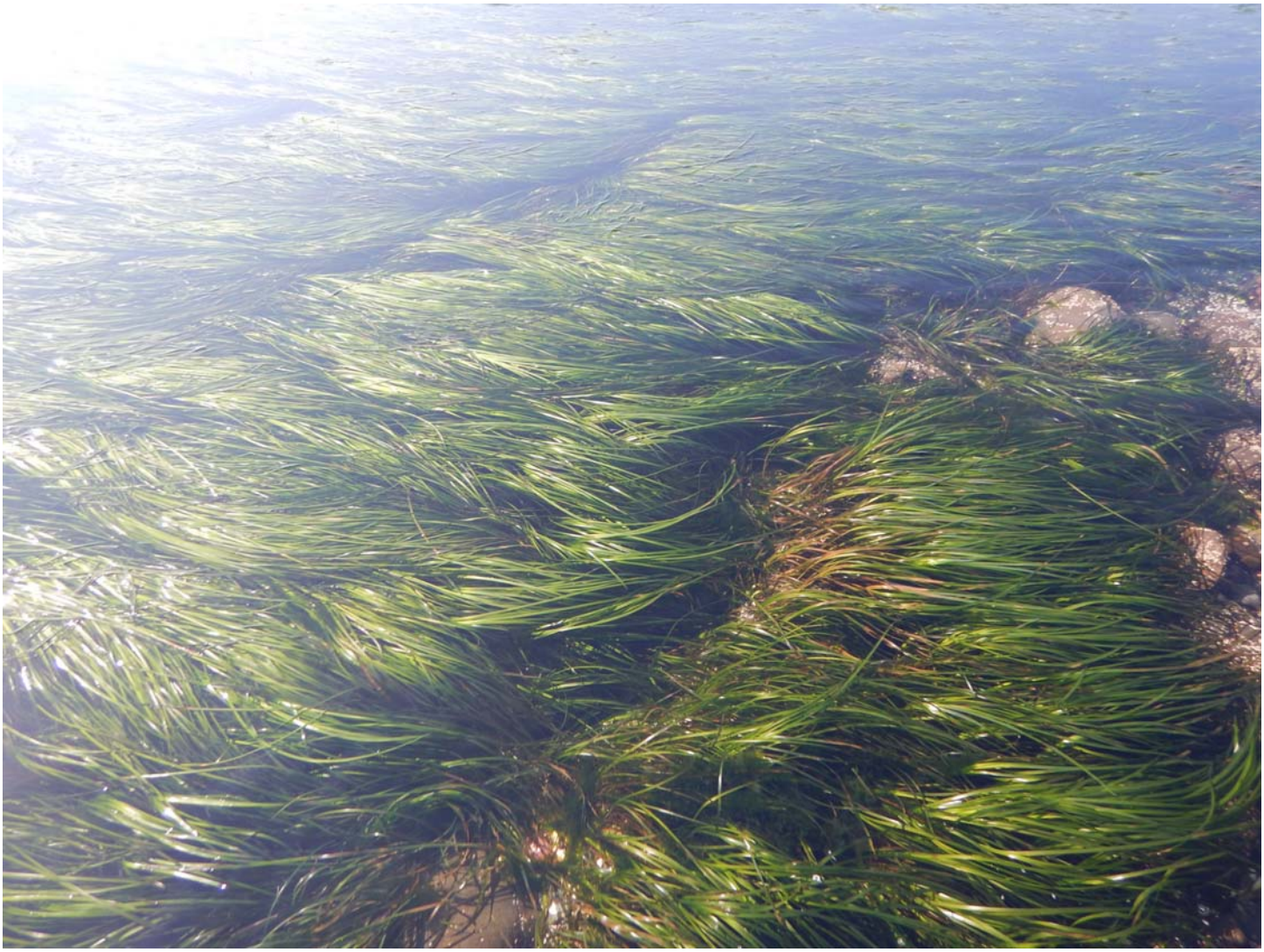
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 001
mostly low intertidal, bedrock; red algae bioband; SCL# 16193; UBC Herbarium
Anchorage Bay, Chignik Bay, May 23, 2016; AKP16_019; N56.32022 W158.35014

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 002
low intertidal; surfgrass bioband; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Phyllospadix serrulatus 003
low intertidal; surfgrass bioband; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 004
underwater; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 005
surf grass roots; ;
Nakalilok Bay, May 7, 2016; AKP16_003; N56.92094 W156.93511

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 006
low intertidal; patchy in red algae bioband; ;
Sutwik Island, May 8, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 007
low intertidal; patchy in red algae bioband; ;
Sutwik Island, May 8, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 008
low intertidal; patchy in red algae bioband; ;
Sutwik Island, May 8, 2016; AKP16_007; N56.57624 W157.23144

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 009
low intertidal; surfgrass bioband; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Phyllospadix serrulatus 010
low intertidal; surfgrass bioband; ;
Chiginagak Bay, May 26, 2016; AKP16_025; N56.96631 W156.78814

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Zostera marina 001
low to mid intertidal, muddy sand; eelgrass bioband; SCL# 16130-1; UBC Herbarium
Portage Bay, Kuiukta Bay, May 21, 2016; AKP16_016; N56.18575 W158.46142

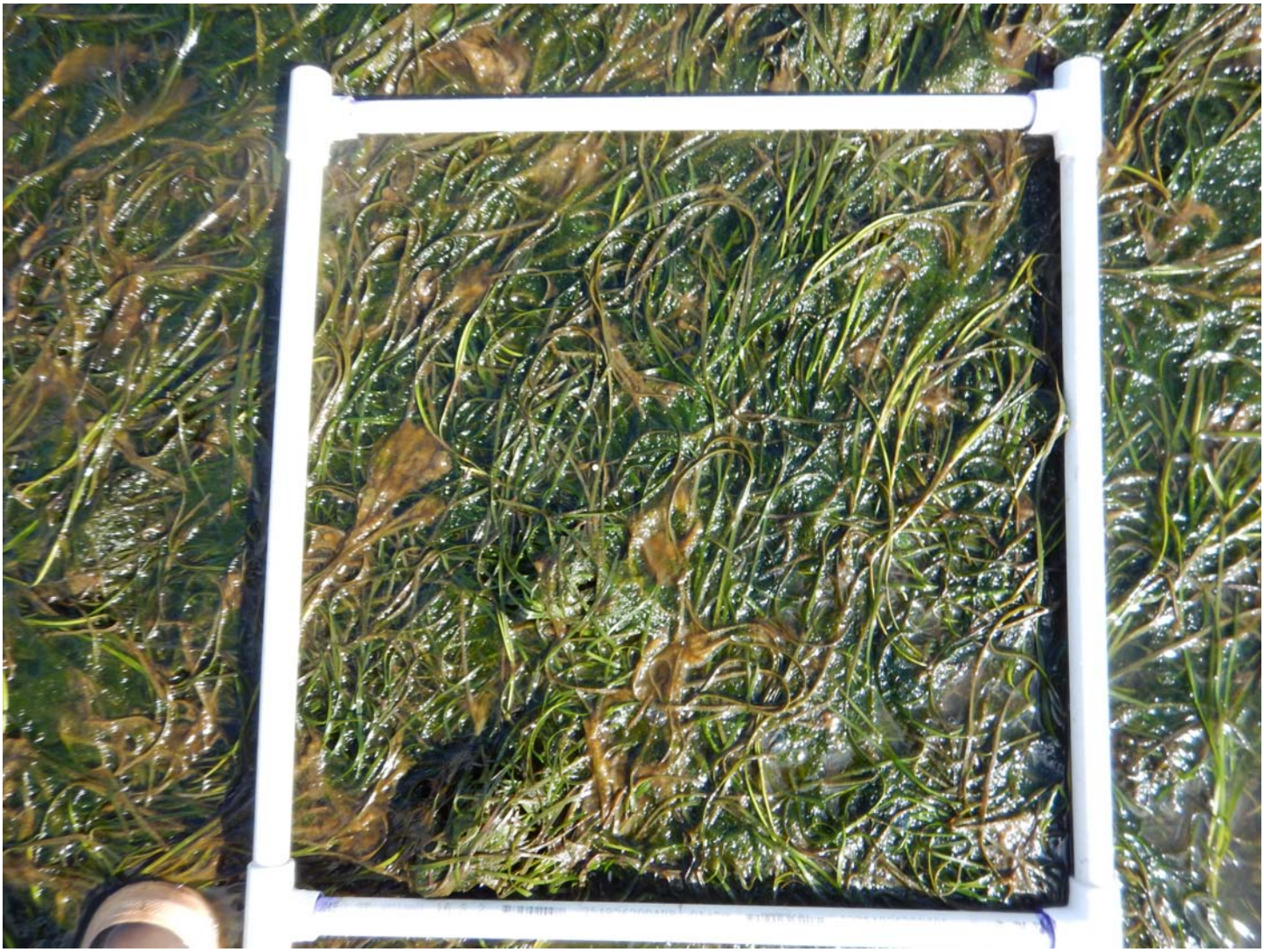
Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Zostera marina 002
low to mid intertidal, muddy sand; eelgrass bioband; SCL# 16130-2; UBC Herbarium
Portage Bay, Kuiukta Bay, May 21, 2016; AKP16_016; N56.18575 W158.46142

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

Zostera marina 003
low intertidal, boulder-cobble-sand, red algal bioband; ML-SS #0097;
Mink Is., E. of Takli Is., Amalik Bay, May 27, 2016; AKP16_028; N58.05822 W154.43911

Collection and Identification by: Lindstrom, Lindeberg, and Saupe



Zostera marina 004
low intertidal; eelgrass bioband; ;
Portage Bay, Kuiukta Bay, May 21, 2016; AKP16_016; N56.18575 W158.46142

Collection and Identification by: Lindstrom, Lindeberg, and Saupe

U.S. Secretary of Commerce
Wilbur L. Ross, Jr.

Acting Under Secretary of Commerce
for Oceans and Atmosphere
Dr. Neil Jacobs

Assistant Administrator for Fisheries
Chris Oliver

March 2019

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