

Table 1. An analysis of variance test series for total catch of crustaceans and four species of crustaceans for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1).

| Habitat                       | Source | df | Ms    | F       |
|-------------------------------|--------|----|-------|---------|
| <i>Hippolyte pleuracantha</i> |        |    |       |         |
| Vegetated Bottom              |        |    |       |         |
| Months                        |        | 12 | 1.133 | 1.20 NS |
| Areas                         |        | 2  | 1.023 | 1.09 NS |
| Error (Interaction)           |        | 24 | 0.942 |         |
| Multiple Range Test**         |        |    |       |         |
|                               | 1      | 2  | 3     |         |
|                               | -----  |    |       |         |
| Mud Bottom                    |        |    |       |         |
| Months                        |        | 12 | 0.690 | 2.03 NS |
| Areas                         |        | 2  | 0.249 | 0.73 NS |
| Error (Interaction)           |        | 24 | 0.341 |         |
| Multiple Range Test**         |        |    |       |         |
|                               | 1      | 2  | 3     |         |
|                               | -----  |    |       |         |
| Sand/Shell Bottom             |        |    |       |         |
| Months                        |        | 12 | 1.304 | 2.72*   |
| Areas                         |        | 2  | 7.170 | 14.94** |
| Error (Interaction)           |        | 24 | 0.480 |         |
| Multiple Range Test**         |        |    |       |         |
|                               | 1      | 3  | 2     |         |
|                               | -----  |    |       |         |

NS = Not significant

\* =  $P \leq 0.05$

\*\* =  $P \leq 0.01$

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| Habitat                 | Source | df | Ms    | F       |
|-------------------------|--------|----|-------|---------|
| <i>Penaeus duorarum</i> |        |    |       |         |
| Vegetated Bottom        |        |    |       |         |
| Months                  |        | 12 | 0.309 | 1.65 NS |
| Areas                   |        | 2  | 0.111 | 0.59 NS |
| Error (Interaction)     |        | 24 | 0.188 |         |
| Multiple Range Test**   |        |    |       |         |
|                         | 1      | 3  | 2     |         |
|                         | -----  |    |       |         |
| Mud Bottom              |        |    |       |         |
| Months                  |        | 12 | 0.441 | 2.24**  |
| Areas                   |        | 2  | 1.058 | 5.38**  |
| Error (Interaction)     |        | 24 | 0.197 |         |
| Multiple Range Test**   |        |    |       |         |
|                         | 3      | 1  | 2     |         |
|                         | -----  |    |       |         |
| Sand/Shell Bottom       |        |    |       |         |
| Months                  |        | 12 | 0.538 | 3.15**  |
| Areas                   |        | 2  | 3.744 | 21.93** |
| Error (Interaction)     |        | 24 | 0.171 |         |
| Multiple Range Test**   |        |    |       |         |
|                         | 3      | 1  | 2     |         |
|                         | -----  |    |       |         |

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\*\* =  $P \leq 0.01$

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| Habitat                        | Source | df | Ms    | F       |
|--------------------------------|--------|----|-------|---------|
| <i>Periclimenes americanus</i> |        |    |       |         |
| Vegetated Bottom               |        |    |       |         |
| Months                         |        | 12 | 0.298 | 1.41 NS |
| Areas                          |        | 2  | 2.813 | 13.33** |
| Error (Interaction)            |        | 24 | 0.211 |         |
| Multiple Range Test**          |        |    |       |         |
|                                | 2      | 1  | 3     |         |
|                                | -----  |    |       |         |
| Mud Bottom                     |        |    |       |         |
| Months                         |        | 12 | 1.338 | 2.77*   |
| Areas                          |        | 2  | 3.579 | 7.40**  |
| Error (Interaction)            |        | 24 | 0.484 |         |
| Multiple Range Test**          |        |    |       |         |
|                                | 2      | 1  | 3     |         |
|                                | -----  |    |       |         |
| Sand/Shell Bottom              |        |    |       |         |
| Months                         |        | 12 | 1.178 | 3.78*   |
| Areas                          |        | 2  | 1.589 | 5.10**  |
| Error (Interaction)            |        | 24 | 0.312 |         |
| Multiple Range Test**          |        |    |       |         |
|                                | 1      | 3  | 2     |         |
|                                | -----  |    |       |         |

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\*\* =  $P \leq 0.01$

Table 1. An analysis of variance test series for total catch of crustaceans and four species of crustaceans for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1) (cont.).

| Habitat                           | Source | df    | Ms    | F       |
|-----------------------------------|--------|-------|-------|---------|
| <i>Periclimenes longicaudatus</i> |        |       |       |         |
| Vegetated Bottom                  |        |       |       |         |
| Months                            |        | 12    | 2.452 | 3.02**  |
| Areas                             |        | 2     | 1.668 | 2.06 NS |
| Error (Interaction)               |        | 24    | 0.811 |         |
| Multiple Range Test**             |        |       |       |         |
|                                   | 1      | 2     | 3     |         |
|                                   | -----  |       |       |         |
| Mud Bottom                        |        |       |       |         |
| Months                            |        | 12    | 1.474 | 4.92**  |
| Areas                             |        | 2     | 4.251 | 14.19** |
| Error (Interaction)               |        | 24    | 0.300 |         |
| Multiple Range Test**             |        |       |       |         |
|                                   | 1      | 2     | 3     |         |
|                                   | -----  | ----- |       |         |
| Sand/Shell Bottom                 |        |       |       |         |
| Months                            |        | 12    | 2.000 | 2.49*   |
| Areas                             |        | 2     | 4.112 | 5.13**  |
| Error (Interaction)               |        | 24    | 0.802 |         |
| Multiple Range Test**             |        |       |       |         |
|                                   | 1      | 3     | 2     |         |
|                                   | -----  |       |       |         |

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\*\* =  $P \leq 0.01$

Table 1. An analysis of variance test series for total catch of crustaceans and four species of crustaceans for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1) (cont.).

| Habitat                   | Source              | df    | Ms    | F        |
|---------------------------|---------------------|-------|-------|----------|
| Crustaceans (all species) |                     |       |       |          |
| Vegetated Bottom          |                     |       |       |          |
|                           | Months              | 12    | 0.208 | 1.39 NS  |
|                           | Areas               | 2     | 1.287 | 8.62**   |
|                           | Error (Interaction) | 24    | 0.149 |          |
| Multiple Range Test**     |                     |       |       |          |
|                           | 1                   | 2     | 3     |          |
|                           |                     | ----- |       |          |
|                           | -----               |       |       |          |
| Mud Bottom                |                     |       |       |          |
|                           | Months              | 12    | 0.899 | 8.73**   |
|                           | Areas               | 2     | 1.518 | 14.736** |
|                           | Error (Interaction) | 24    | 0.103 |          |
| Multiple Range Test**     |                     |       |       |          |
|                           | 1                   | 2     | 3     |          |
|                           |                     | ----- |       |          |
| Sand/Shell Bottom         |                     |       |       |          |
|                           | Months              | 12    | 0.885 | 1.91 NS  |
|                           | Areas               | 2     | 3.204 | 6.91**   |
|                           | Error (Interaction) | 24    | 0.463 |          |
| Multiple Range Test**     |                     |       |       |          |
|                           | 1                   | 3     | 2     |          |
|                           |                     | ----- |       |          |
|                           | -----               |       |       |          |
| NS = Not significant      |                     |       |       |          |
| * = $P \leq 0.05$         |                     |       |       |          |
| ** = $P \leq 0.01$        |                     |       |       |          |

Table 2. An analysis of variance test series for total catch of fish and five species of fish for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1).

| Habitat                  | Source | df | Ms    | F       |
|--------------------------|--------|----|-------|---------|
| <i>Lutjanus synagris</i> |        |    |       |         |
| Vegetated Bottom         |        |    |       |         |
| Months                   |        | 12 | 0.508 | 5.13**  |
| Areas                    |        | 2  | 1.225 | 12.37** |
| Error (Interaction)      |        | 24 | 0.099 |         |
| Multiple Range Test**    |        |    |       |         |
|                          | 2      | 1  | 3     |         |
|                          | -----  |    |       |         |
| Mud Bottom               |        |    |       |         |
| Months                   |        | 12 | 0.079 | 0.85 NS |
| Areas                    |        | 2  | 1.731 | 18.58** |
| Error (Interaction)      |        | 24 | 0.093 |         |
| Multiple Range Test**    |        |    |       |         |
|                          | 2      | 1  | 3     |         |
|                          | -----  |    |       |         |
| Sand/Shell Bottom        |        |    |       |         |
| Months                   |        | 12 | 0.261 | 1.65 NS |
| Areas                    |        | 2  | 0.265 | 1.67 NS |
| Error (Interaction)      |        | 24 | 0.158 |         |
| Multiple Range Test**    |        |    |       |         |
|                          | 2      | 1  | 3     |         |
|                          | -----  |    |       |         |

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\*\* =  $P \leq 0.01$

Table 2. An analysis of variance test series for total catch of fish and five species of fish for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1) (cont.).

| Habitat                  | Source | df | Ms    | F       |
|--------------------------|--------|----|-------|---------|
| <i>Eucinostomus gula</i> |        |    |       |         |
| Vegetated Bottom         |        |    |       |         |
| Months                   |        | 12 | 1.051 | 4.65**  |
| Areas                    |        | 2  | 0.046 | 0.21 NS |
| Error (Interaction)      |        | 24 | 0.226 |         |
| Multiple Range Test**    |        |    |       |         |
|                          | 3      | 2  | 1     |         |
|                          | -----  |    |       |         |
| Mud Bottom               |        |    |       |         |
| Months                   |        | 12 | 0.476 | 2.21*   |
| Areas                    |        | 2  | 3.746 | 17.37** |
| Error (Interaction)      |        | 24 | 0.216 |         |
| Multiple Range Test**    |        |    |       |         |
|                          | 2      | 3  | 1     |         |
|                          | -----  |    |       |         |
| Sand/Shell Bottom        |        |    |       |         |
| Months                   |        | 12 | 0.888 | 3.51**  |
| Areas                    |        | 2  | 0.819 | 3.24 NS |
| Error (Interaction)      |        | 24 | 0.253 |         |
| Multiple Range Test**    |        |    |       |         |
|                          | 3      | 1  | 2     |         |
|                          | -----  |    |       |         |

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\*\* =  $P \leq 0.01$

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| Habitat                         | Source                | df | Ms    | F       |
|---------------------------------|-----------------------|----|-------|---------|
| <i>Orthopristis chrysoptera</i> |                       |    |       |         |
| Vegetated Bottom                |                       |    |       |         |
|                                 | Months                | 12 | 1.984 | 6.56**  |
|                                 | Areas                 | 2  | 0.292 | 0.97 NS |
|                                 | Error (Interaction)   | 24 | 0.302 |         |
|                                 | Multiple Range Test** |    |       |         |
|                                 | 1                     | 3  | 2     |         |
|                                 | -----                 |    |       |         |
| Mud Bottom                      |                       |    |       |         |
|                                 | Months                | 12 | 0.752 | 4.15**  |
|                                 | Areas                 | 2  | 0.091 | 0.50 NS |
|                                 | Error (Interaction)   | 24 | 0.181 |         |
|                                 | Multiple Range Test** |    |       |         |
|                                 | 1                     | 2  | 3     |         |
|                                 | -----                 |    |       |         |
| Sand/Shell Bottom               |                       |    |       |         |
|                                 | Months                | 12 | 1.363 | 6.77**  |
|                                 | Areas                 | 2  | 2.431 | 12.06** |
|                                 | Error (Interaction)   | 24 | 0.202 |         |
|                                 | Multiple Range Test** |    |       |         |
|                                 | 3                     | 1  | 2     |         |
|                                 | -----                 |    |       |         |

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\*\* =  $P \leq 0.01$



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| Habitat                   | Source | df | Ms    | F       |
|---------------------------|--------|----|-------|---------|
| <i>Lagodon rhomboides</i> |        |    |       |         |
| Vegetated Bottom          |        |    |       |         |
| Months                    |        | 12 | 1.539 | 2.71**  |
| Areas                     |        | 2  | 2.565 | 4.52*   |
| Error (Interaction)       |        | 24 | 0.567 |         |
| Multiple Range Test**     |        |    |       |         |
|                           | 1      | 3  | 2     |         |
|                           | -----  |    |       |         |
| Mud Bottom                |        |    |       |         |
| Months                    |        | 12 | 0.702 | 2.32*   |
| Areas                     |        | 2  | 0.500 | 1.65 NS |
| Error (Interaction)       |        | 24 | 0.303 |         |
| Multiple Range Test**     |        |    |       |         |
|                           | 2      | 1  | 3     |         |
|                           | -----  |    |       |         |
| Sand/Shell Bottom         |        |    |       |         |
| Months                    |        | 12 | 0.522 | 2.24*   |
| Areas                     |        | 2  | 4.900 | 20.99** |
| Error (Interaction)       |        | 24 | 0.233 |         |
| Multiple Range Test**     |        |    |       |         |
|                           | 1      | 3  | 2     |         |
|                           | -----  |    |       |         |

NS = Not significant

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\*\* =  $P \leq 0.01$

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| Habitat                     | Source | df | Ms    | F       |
|-----------------------------|--------|----|-------|---------|
| <i>Bairdiella chrysurus</i> |        |    |       |         |
| Vegetated Bottom            |        |    |       |         |
| Months                      |        | 12 | 0.714 | 4.41**  |
| Areas                       |        | 2  | 3.258 | 20.12** |
| Error (Interaction)         |        | 24 | 0.162 |         |
| Multiple Range Test**       |        |    |       |         |
|                             | 1      | 3  | 2     |         |
|                             | -----  |    |       |         |
| Mud Bottom                  |        |    |       |         |
| Months                      |        | 12 | 0.258 | 1.99 NS |
| Areas                       |        | 2  | 4.364 | 33.70** |
| Error (Interaction)         |        | 24 | 0.129 |         |
| Multiple Range Test**       |        |    |       |         |
|                             | 3      | 1  | 2     |         |
|                             | -----  |    |       |         |
| Sand/Shell Bottom           |        |    |       |         |
| Months                      |        | 12 | 0.762 | 7.05**  |
| Areas                       |        | 2  | 2.334 | 21.59** |
| Error (Interaction)         |        | 24 | 0.108 |         |
| Multiple Range Test**       |        |    |       |         |
|                             | 3      | 1  | 2     |         |
|                             | -----  |    |       |         |

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\*\* =  $P \leq 0.01$

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| Habitat                                                         | Source              | df | Ms    | F        |
|-----------------------------------------------------------------|---------------------|----|-------|----------|
| Fish (all species)                                              |                     |    |       |          |
| Vegetated Bottom                                                |                     |    |       |          |
|                                                                 | Months              | 12 | 0.232 | 1.88 NS  |
|                                                                 | Areas               | 2  | 0.351 | 2.86 NS  |
|                                                                 | Error (Interaction) | 24 | 0.123 |          |
| Multiple Range Test**                                           |                     |    |       |          |
| <div> <div>132</div> <div>32</div> <div>2</div> </div>          |                     |    |       |          |
| -----                                                           |                     |    |       |          |
| Mud Bottom                                                      |                     |    |       |          |
|                                                                 | Months              | 12 | 0.129 | 2.02 NS  |
|                                                                 | Areas               | 2  | 0.107 | 1.67 NS  |
|                                                                 | Error (Interaction) | 24 | 0.604 |          |
| Multiple Range Test**                                           |                     |    |       |          |
| <div> <div>312</div> <div>12</div> <div>2</div> </div>          |                     |    |       |          |
| -----                                                           |                     |    |       |          |
| Sand/Shell Bottom                                               |                     |    |       |          |
|                                                                 | Months              | 12 | 0.291 | 1.68 NS  |
|                                                                 | Areas               | 2  | 2.336 | 13.49 ** |
|                                                                 | Error (Interaction) | 24 | 0.173 |          |
| Multiple Range Test**                                           |                     |    |       |          |
| <div> <div>213</div> <div>13</div> <div>3</div> </div>          |                     |    |       |          |
| -----                                                           |                     |    |       |          |
| NS = Not significant<br>* = $P \leq 0.05$<br>** = $P \leq 0.01$ |                     |    |       |          |

Table 3. An analysis of variance test series for total catch of mollusks and two species of mollusks for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1).

| Habitat               | Source | df | Ms     | F       |
|-----------------------|--------|----|--------|---------|
| <i>Bittium varium</i> |        |    |        |         |
| Vegetated Bottom      |        |    |        |         |
| Months                |        | 12 | 2.456  | 4.19**  |
| Areas                 |        | 2  | 10.211 | 17.42** |
| Error (Interaction)   |        | 24 | 0.586  |         |
| Multiple Range Test** |        |    |        |         |
|                       | 3      | 1  | 2      |         |
|                       | -----  |    |        |         |
| Mud Bottom            |        |    |        |         |
| Months                |        | 12 | 1.649  | 3.97**  |
| Areas                 |        | 2  | 1.943  | 4.67*   |
| Error (Interaction)   |        | 24 | 0.416  |         |
| Multiple Range Test** |        |    |        |         |
|                       | 3      | 1  | 2      |         |
|                       | -----  |    |        |         |
| Sand/Shell Bottom     |        |    |        |         |
| Months                |        | 12 | 2.098  | 3.40**  |
| Areas                 |        | 2  | 11/457 | 18.58** |
| Error (Interaction)   |        | 24 | 0.617  |         |
| Multiple Range Test** |        |    |        |         |
|                       | 3      | 1  | 2      |         |
|                       | -----  |    |        |         |

NS = Not significant

\* =  $P \leq 0.05$

\*\* =  $P \leq 0.01$

Table 3. An analysis of variance test series for total catch of mollusks and two species of mollusks for differences among 13 months and among three similar habitats at Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 to July 1972. The multiple range test shows interarea relationships (1 = Rookery Bay; 2 = Fakahatchee Bay; 3 = Marco Island). Catch data is transformed to logarithm (Catch +1) (cont.).

| Habitat                | Source | df | Ms    | F       |
|------------------------|--------|----|-------|---------|
| <i>Mitrella lunata</i> |        |    |       |         |
| Vegetated Bottom       |        |    |       |         |
| Months                 |        | 12 | 2.267 | 6.03**  |
| Areas                  |        | 2  | 9.823 | 26.11** |
| Error (Interaction)    |        | 24 | 0.376 |         |
| Multiple Range Test**  |        |    |       |         |
|                        | 3      | 1  | 2     |         |
| Mud Bottom             |        |    |       |         |
| Months                 |        | 12 | 2.062 | 4.05**  |
| Areas                  |        | 2  | 6.024 | 11.83** |
| Error (Interaction)    |        | 24 | 0.509 |         |
| Multiple Range Test**  |        |    |       |         |
|                        | 3      | 1  | 2     |         |
| -----                  |        |    |       |         |
| Sand/Shell Bottom      |        |    |       |         |
| Months                 |        | 12 | 2.648 | 7.36**  |
| Areas                  |        | 2  | 7.336 | 20.40** |
| Error (Interaction)    |        | 24 | 0.360 |         |
| Multiple Range Test**  |        |    |       |         |
|                        | 3      | 1  | 2     |         |
| -----                  |        |    |       |         |

NS = Not significant

\* =  $P \leq 0.05$

\*\* =  $P \leq 0.01$

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| Habitat                | Source | df | Ms    | F       |
|------------------------|--------|----|-------|---------|
| Mollusks (all species) |        |    |       |         |
| Vegetated Bottom       |        |    |       |         |
| Months                 |        | 12 | 1.599 | 1.85 NS |
| Areas                  |        | 2  | 1.332 | 1.54 NS |
| Error (Interaction)    |        | 24 | 0.867 |         |
| Multiple Range Test**  |        |    |       |         |
|                        | 1      | 2  | 3     |         |
|                        | -----  |    |       |         |
| Mud Bottom             |        |    |       |         |
| Months                 |        | 12 | 2.603 | 7.43 ** |
| Areas                  |        | 2  | 0.401 | 1.14 NS |
| Error (Interaction)    |        | 24 | 0.351 |         |
| Multiple Range Test**  |        |    |       |         |
|                        | 1      | 2  | 3     |         |
|                        | -----  |    |       |         |
| Sand/Shell Bottom      |        |    |       |         |
| Months                 |        | 12 | 2.160 | 2.63 ** |
| Areas                  |        | 2  | 2.260 | 2.75 NS |
| Error (Interaction)    |        | 24 | 0.823 |         |
| Multiple Range Test**  |        |    |       |         |
|                        | 1      | 3  | 2     |         |
|                        | -----  |    |       |         |
| NS = Not significant   |        |    |       |         |
| * = $P \leq 0.05$      |        |    |       |         |
| ** = $P \leq 0.01$     |        |    |       |         |

Table 4. A distribution of the numbers of animals and the numbers of species for major taxa taken in a trawl survey in Rookery Bay, Fakahatchee Bay and near Marco Island from July 1971 to July 1972. Percentage values within each taxa represent the contribution of each sampling area to the total catch of that taxa. Percentage values associated with the total catch represent the contribution for each major taxa to the total catch of all animals.

| TAXA            | SAMPLING AREAS     |                  |     |                        |                  |     |                  |                  |     |                   |     |
|-----------------|--------------------|------------------|-----|------------------------|------------------|-----|------------------|------------------|-----|-------------------|-----|
|                 | .....ROOKERY ..... |                  |     | ..... FAKAHATCHEE..... |                  |     | .....MARCO ..... |                  |     | ..... TOTAL ..... |     |
|                 | BAY                |                  |     | BAY                    |                  |     |                  |                  |     | CATCH             |     |
|                 | *Nos. of Spec.     | *Nos. of Animals | 0/0 | *Nos. of Spec.         | *Nos. of Animals | 0/0 | *Nos. of Spec.   | *Nos. of Animals | 0/0 | Nos. of Animals   | 0/0 |
| Crustaceans     | 33/12              | 88,048           | 16  | 31/14                  | 224,087          | 41  | 51/16            | 229,992          | 43  | 542,127           | 54  |
| Mollusks        | 36/3               | 24,130           | 20  | 41/9                   | 59,511           | 49  | 72/23            | 37,069           | 31  | 120,710           | 12  |
| Fish            | 51/3               | 7,210            | 24  | 47/2                   | 15,232           | 50  | 59/4             | 8,014            | 26  | 30,456            | 3   |
| Polychaetes     | 0/14               | 966              | 1   | 0/12                   | 1,798            | 1   | 0/8              | 149,629          | 98  | 152,393           | 15  |
| Echinoderms     | 5/1                | 34               | <1  | 3/1                    | 4                | <1  | 12/8             | 124,842          | 99  | 124,880           | 12  |
| Tunicates       | 2/1                | 9,597            | 29  | 0/4                    | 21,916           | 67  | 0/5              | 1,449            | 4   | 32,962            | 3   |
| Bryozoans       | 0/1                | 5                | <1  | 0/1                    | 5                | <1  | 0/2              | 2,588            | 99  | 2,598             | <1  |
| Anemones        | 0/2                | 104              | 25  | 0/2                    | 14               | 3   | 0/3              | 303              | 72  | 421               | <0  |
| Spinculid worms | 0/1                | 16               | 25  | 0/1                    | 44               | 70  | 0/2              | 3                | 5   | 63                | <0  |
| Flat worms      | 0/2                | 9                | 20  | 0/1                    | 3                | 7   | 0/1              | 32               | 73  | 44                | <0  |
| Sponges         | 0/1                | 1                | 3   | 0/1                    | 1                | 3   | 0/1              | 34               | 94  | 36                | <0  |
| Total           | 127/41             | 130,120          | 13  | 122/47                 | 322,615          | 32  | 194/71           | 553,955          | 55  | 1,006,690         | 10  |

Numerator = Number of species.

Denominator = Numbers of higher taxonomic groups (i.e. animals for which identification was only possible to genera or some higher grouping).

Table 5. Total catches of three major taxa and certain dominant species from common habitats in Rookery Bay, Fakahatchee Bay and near Marco Island. Percentage values within the major taxa or species represent the contribution of each habitat type to the total catch for that group or species.

|                                   | HABITATS   |     |        |     |         |     |             |     |
|-----------------------------------|------------|-----|--------|-----|---------|-----|-------------|-----|
|                                   | Sand-Shell | 0/0 | Mud    | 0/0 | Veget.  | 0/0 | Grand Total | 0/0 |
| Crustaceans                       | 128,876    | 24  | 97,738 | 18  | 315,513 | 58  | 542,127     | 54  |
| <i>Hippolyte pleuracantha</i>     | 5,356      | 25  | 641    | 3   | 15,581  | 72  | 21,578      | 2   |
| <i>Penaeus duorarum</i>           | 11,490     | 22  | 9,036  | 17  | 32,845  | 61  | 53,371      | 5   |
| <i>Periclemenes americanus</i>    | 12,324     | 18  | 14,446 | 22  | 40,411  | 60  | 67,181      | 7   |
| <i>Periclemenes longicaudatus</i> | 15,740     | 25  | 2,004  | 3   | 45,279  | 72  | 63,023      | 6   |
| Fish                              | 8,208      | 27  | 5,038  | 17  | 17,210  | 57  | 30,456      | 3   |
| <i>Lutjanus griseus</i>           | 162        | 31  | 117    | 22  | 252     | 47  | 531         | <   |
| <i>Eucinostomus gula</i>          | 2,533      | 31  | 1,408  | 17  | 4,336   | 52  | 8,277       | 3   |
| <i>Orthopristes chrysoptera</i>   | 1,086      | 31  | 481    | 14  | 1,957   | 55  | 3,524       | <1  |
| <i>Lagodon rhomboides</i>         | 1,277      | 14  | 640    | 7   | 7,001   | 79  | 8,918       | 1   |
| <i>Bairdiella chrysura</i>        | 478        | 32  | 412    | 28  | 604     | 40  | 1,494       | <1  |
| Mollusks                          | 34,189     | 28  | 23,944 | 20  | 62,577  | 52  | 120,710     | 12  |
| <i>Mitrella lunata</i>            | 9,996      | 33  | 7,703  | 25  | 12,916  | 42  | 30,615      | 5   |
| <i>Bittium varium</i>             | 15,903     | 40  | 5,900  | 15  | 17,545  | 45  | 39,348      | 4   |



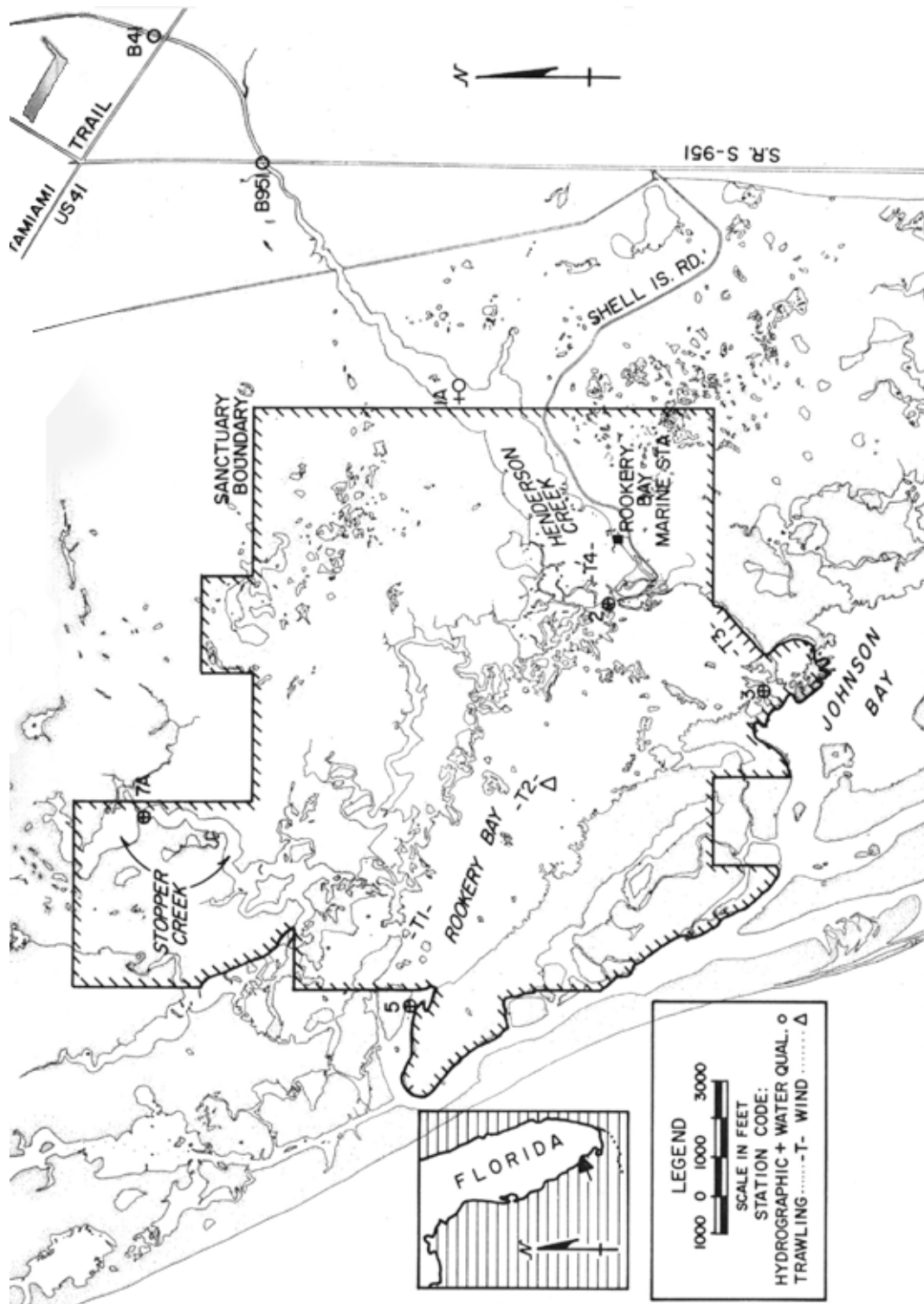


Figure 1. Rookery Bay Sanctuary showing sampling stations.

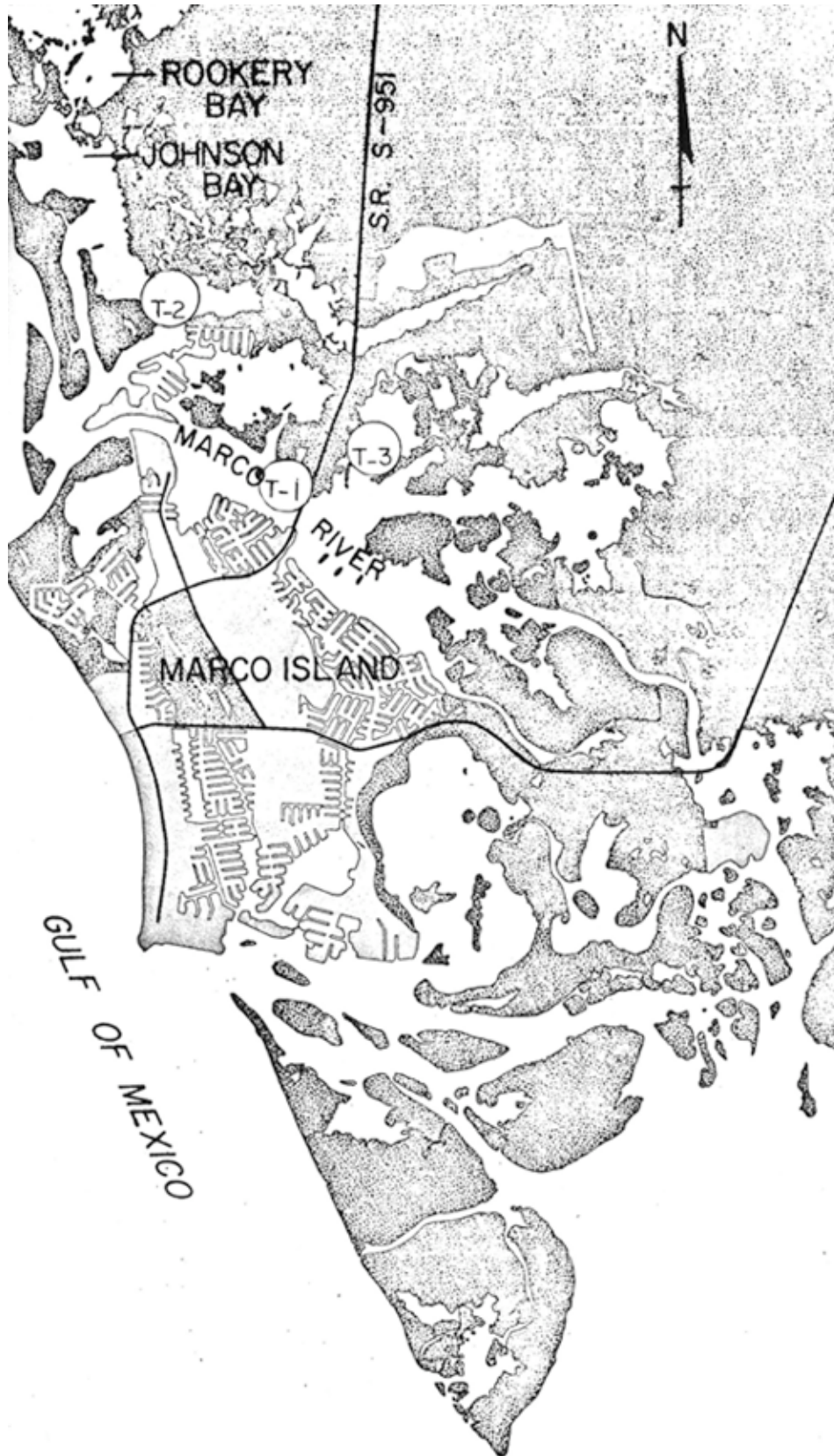


Figure 2. Marco Island showing sampling stations.

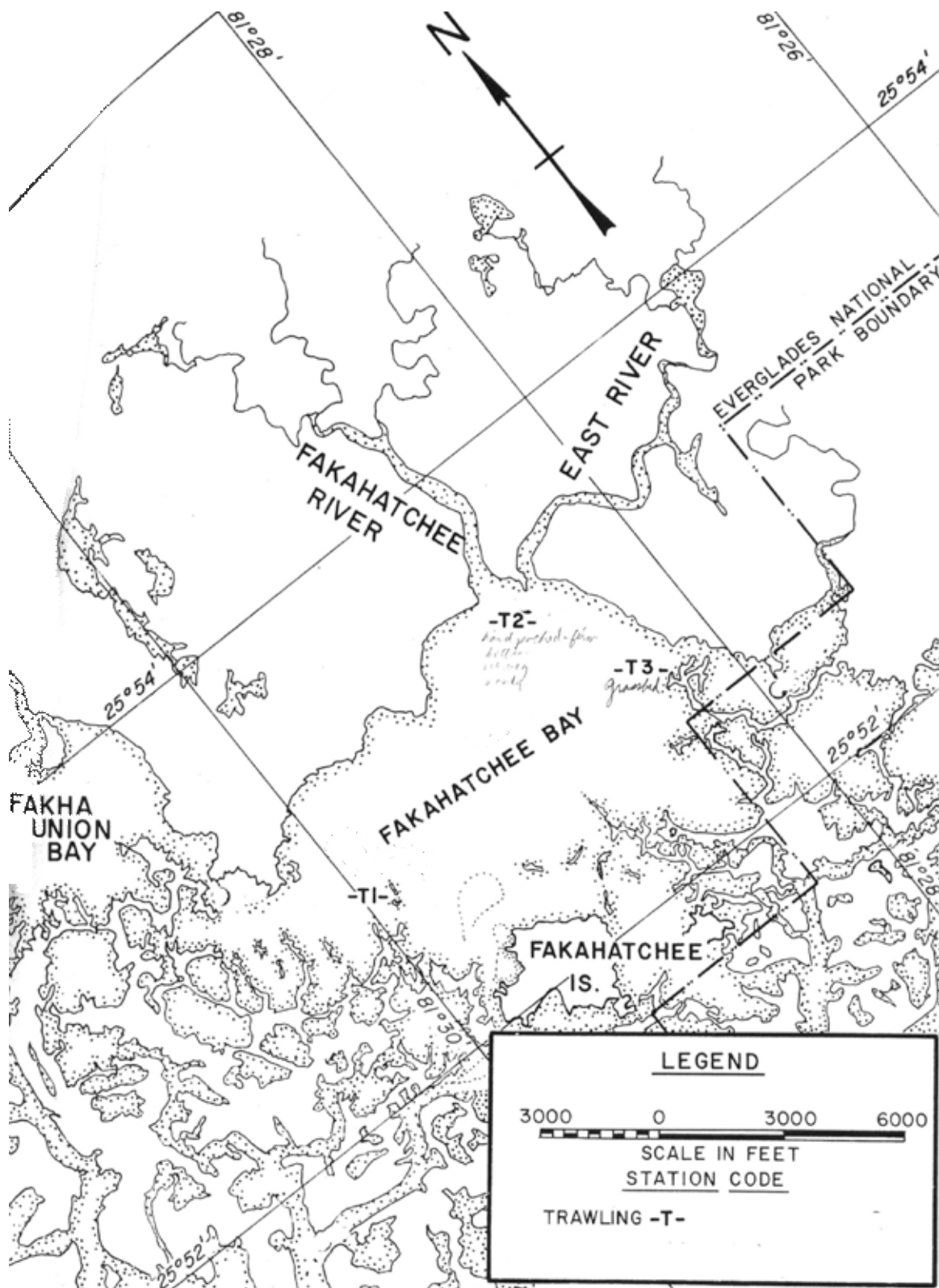


Figure 3. Fakahatchee Bay showing sampling stations.



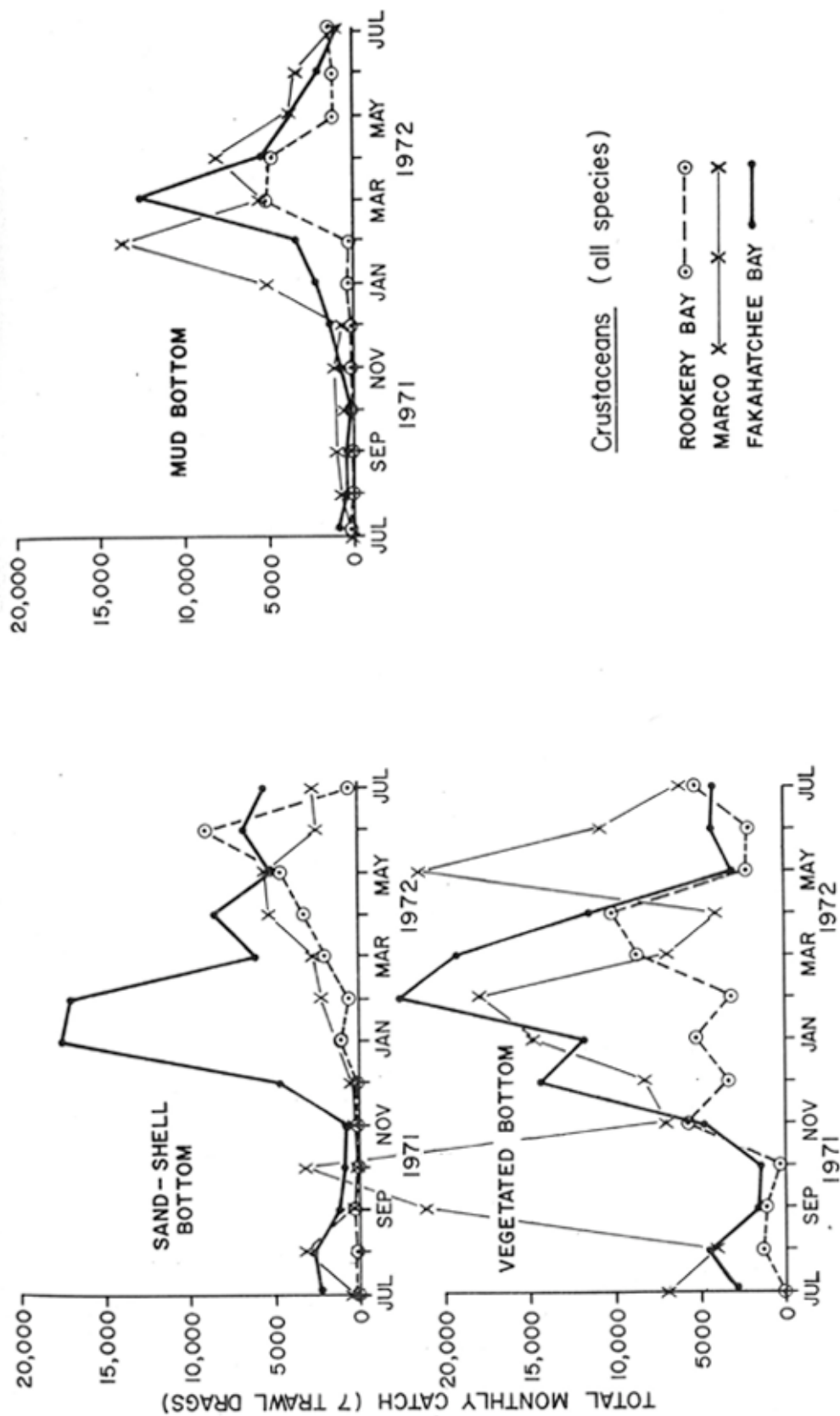


Figure 4. Total monthly catches of crustaceans from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

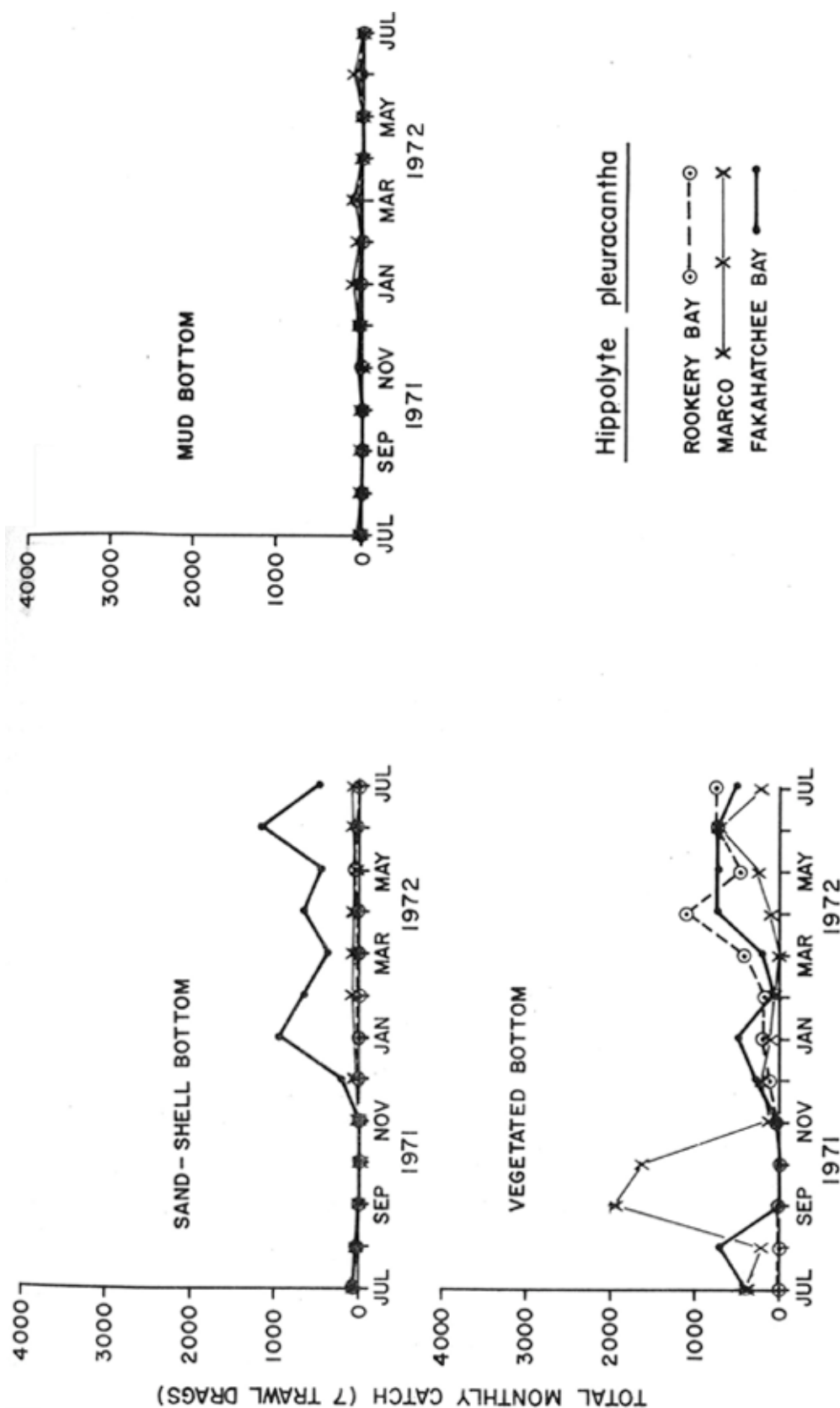


Figure 5. Total monthly trawl catches of *Hippolyte pleuracantha* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

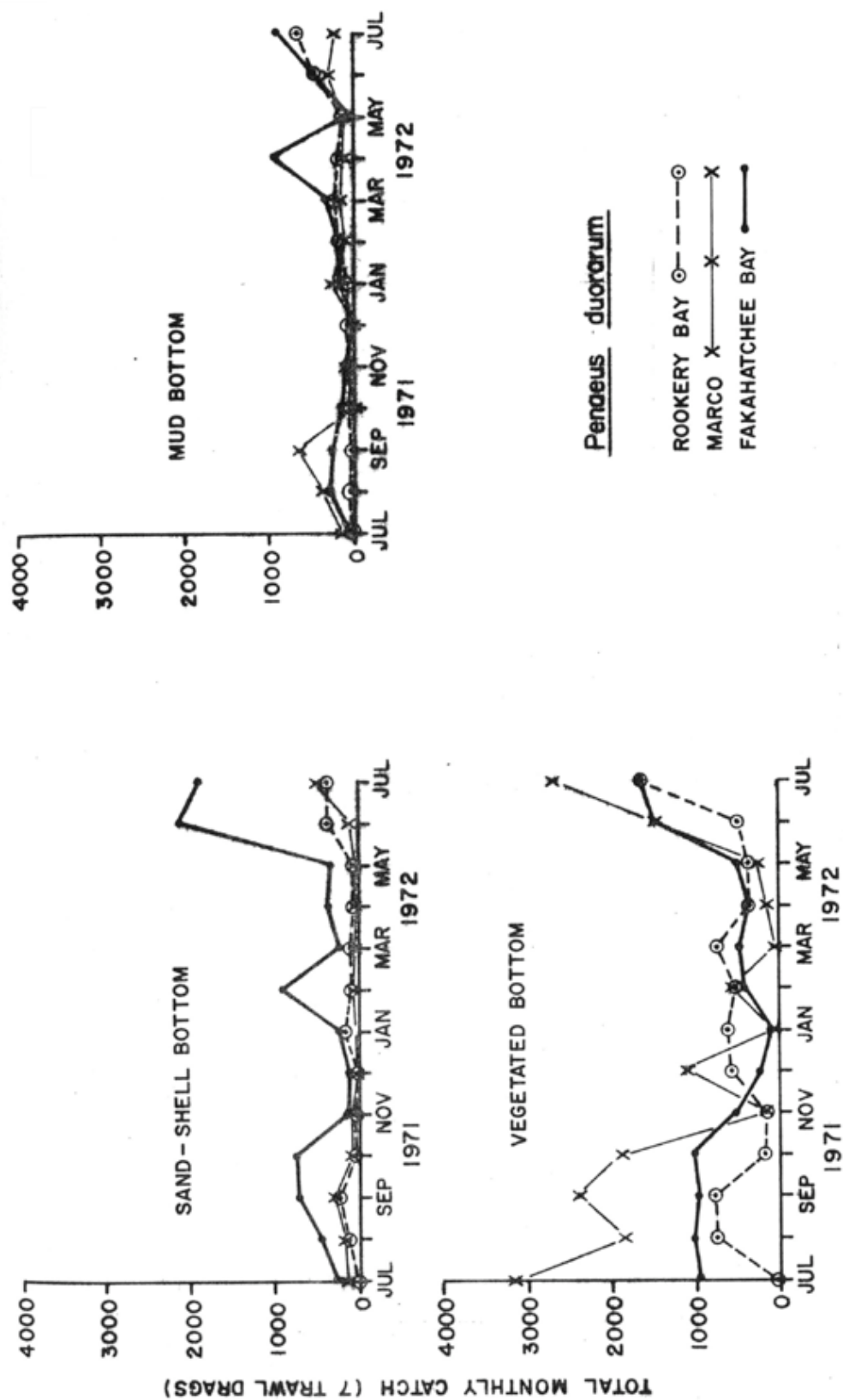


Figure 6. Total monthly trawl catches of *Peneaus duorarum* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

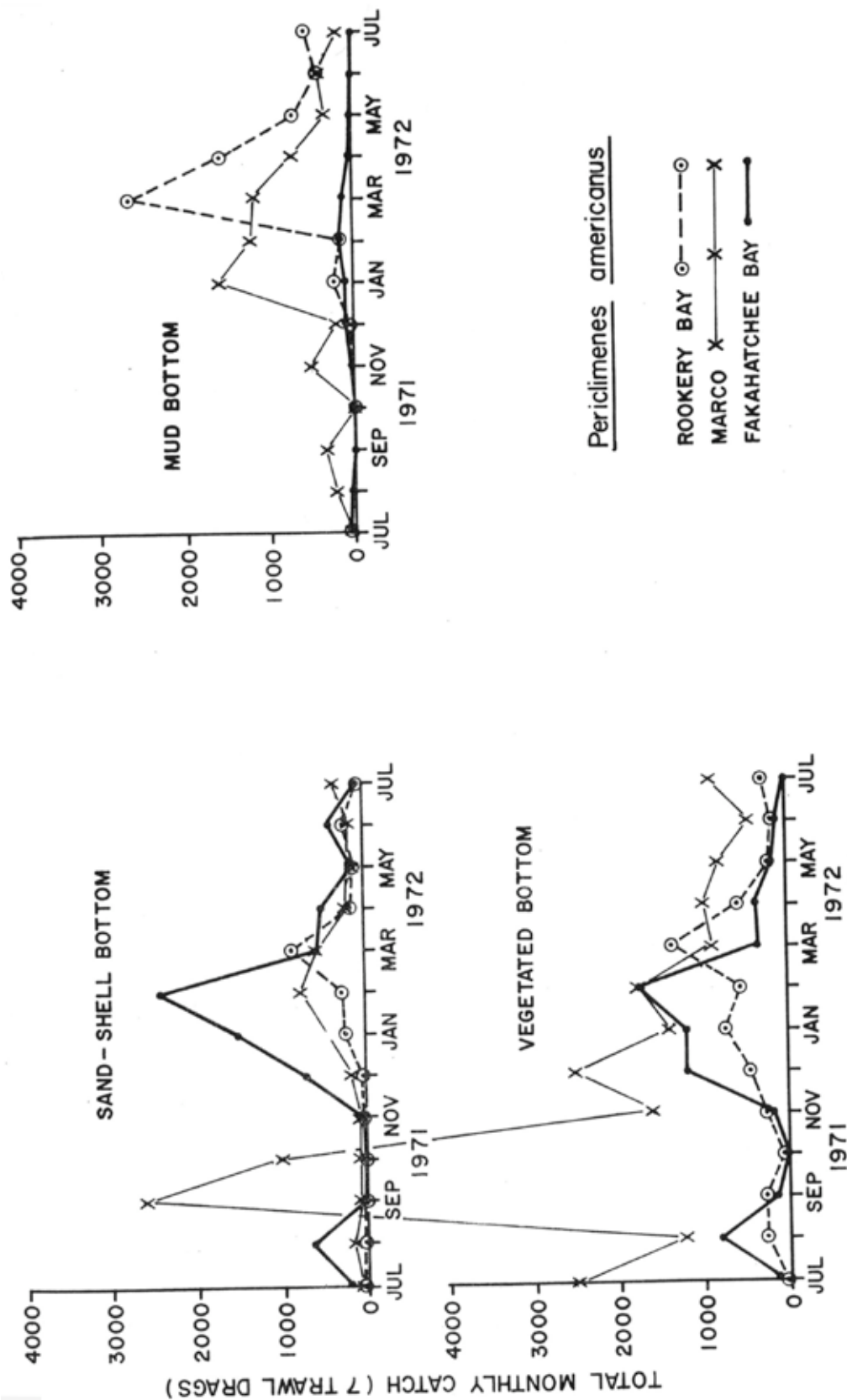


Figure 7. Total monthly trawl catches of *Periclimenes americanus* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

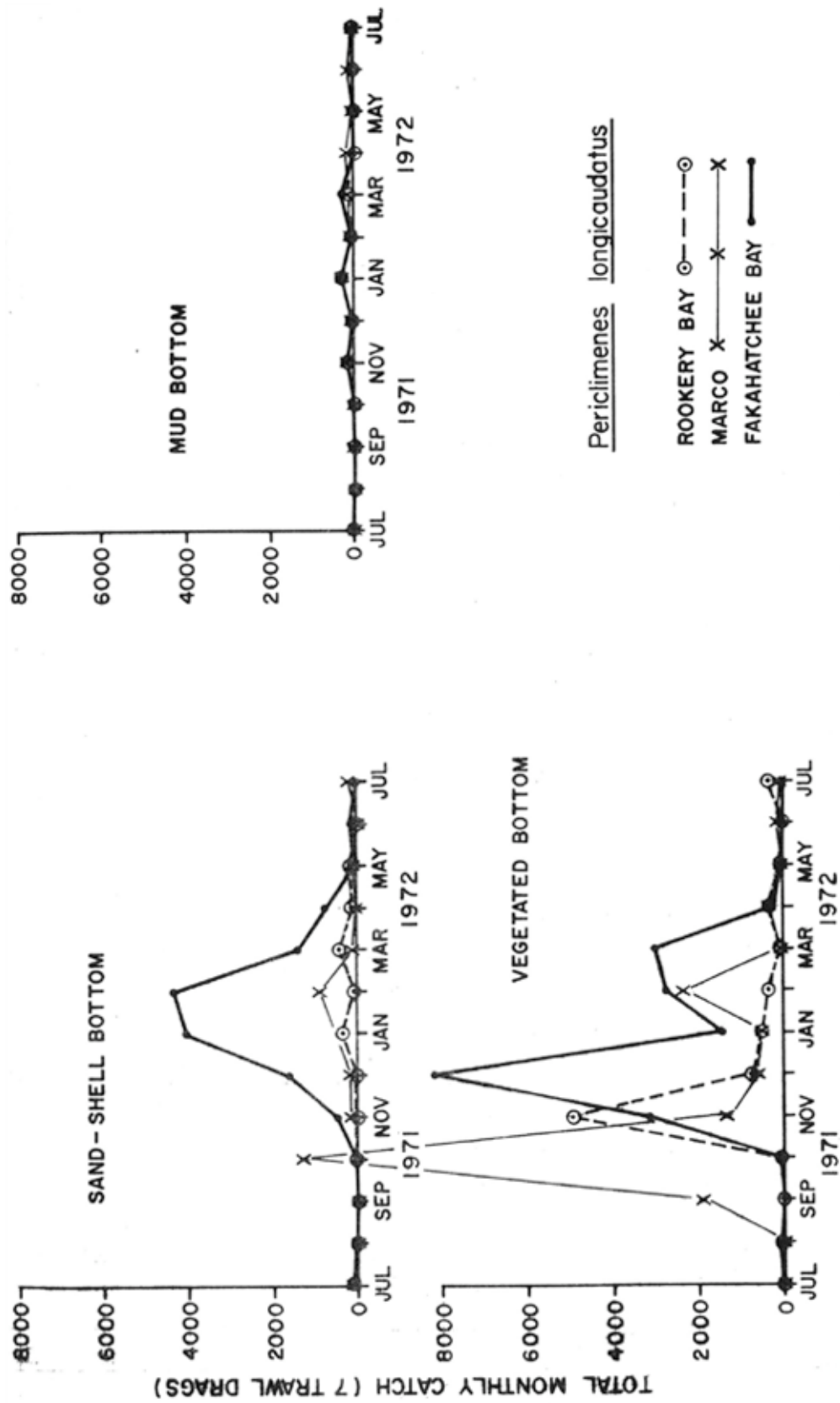


Figure 8. Total monthly trawl stations of *Periclimenes longicaudatus* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.



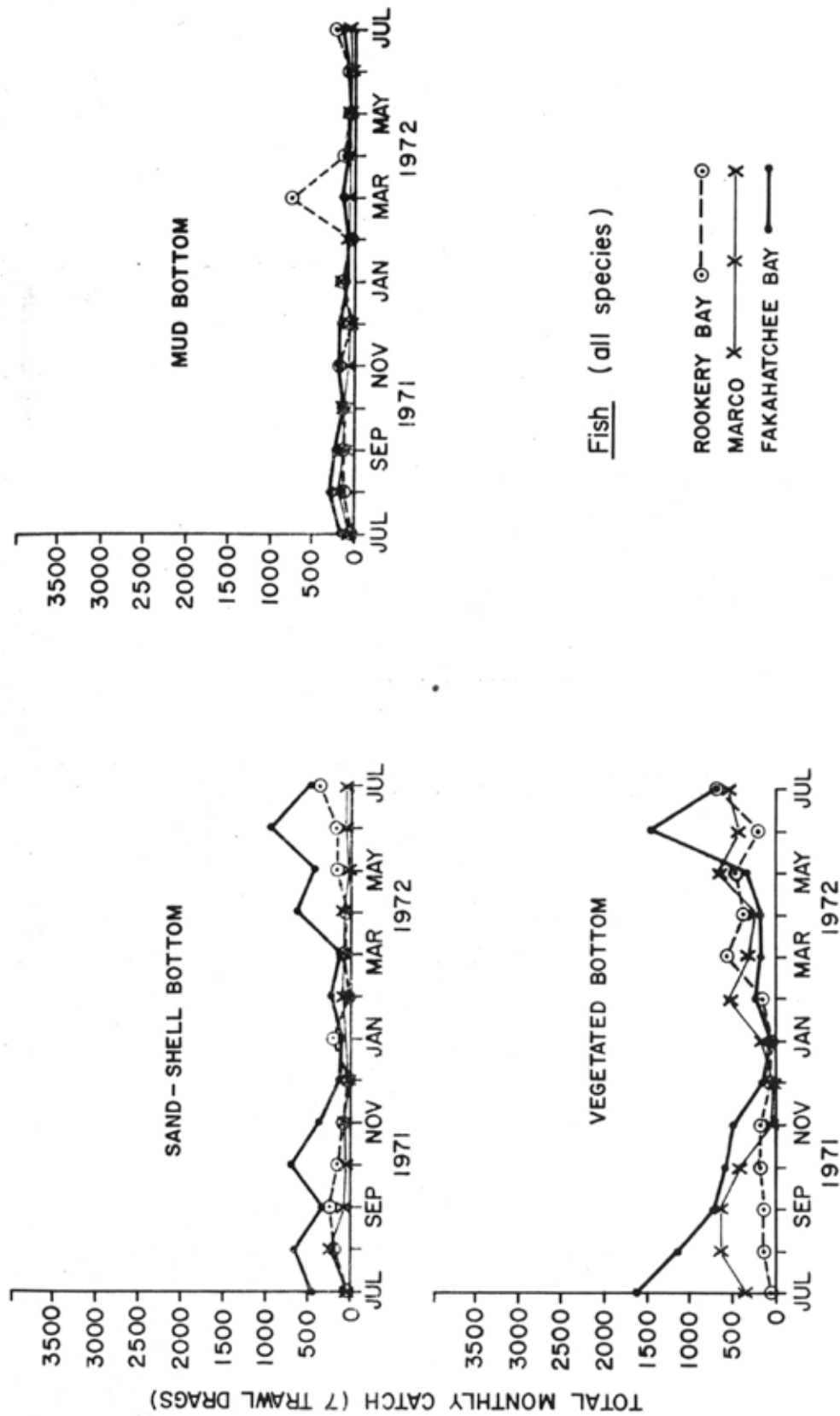


Figure 9. Total monthly trawl catches of fish from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

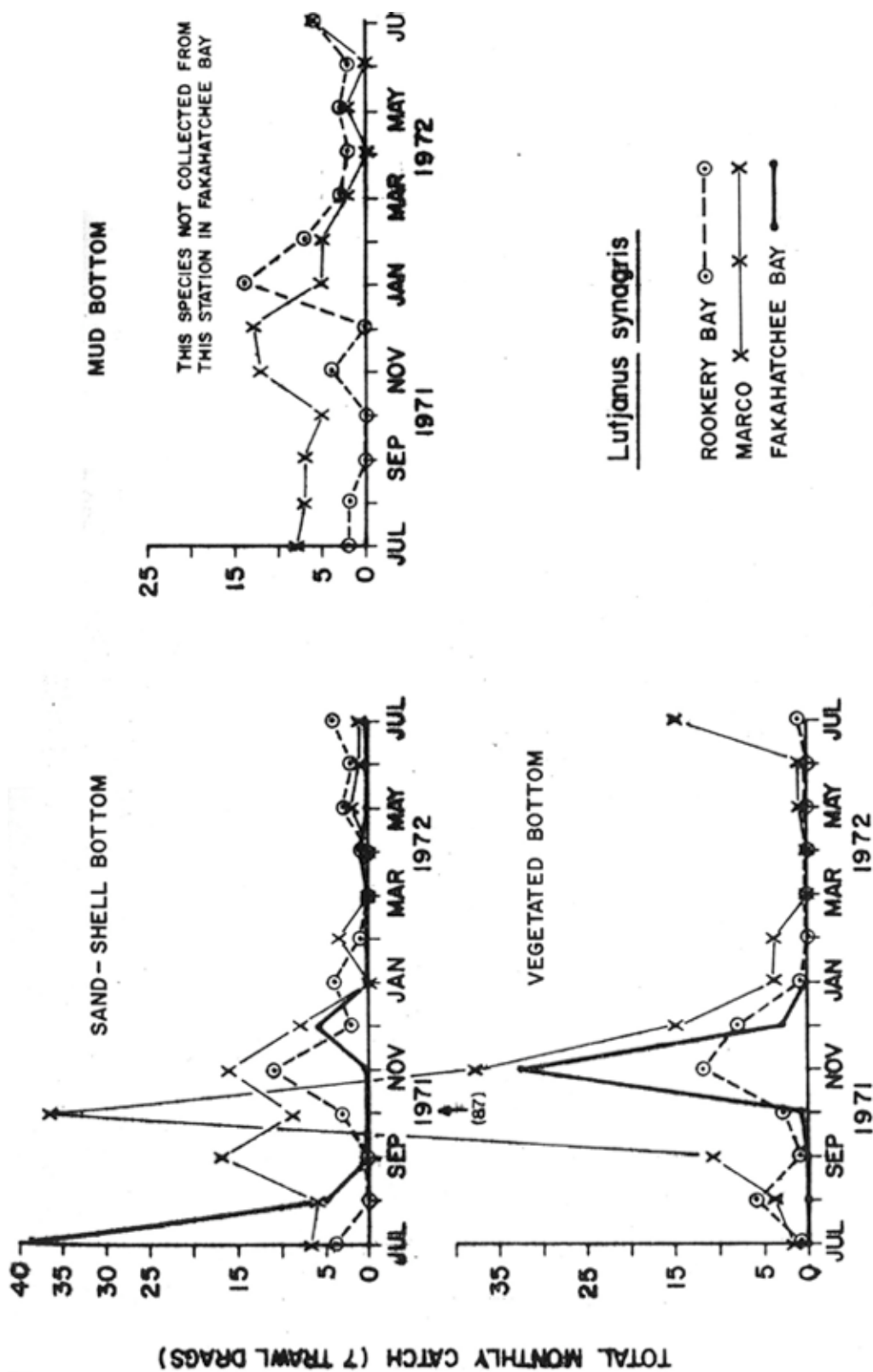


Figure 10. Total monthly trawl catches of *Lutjanus synagris* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

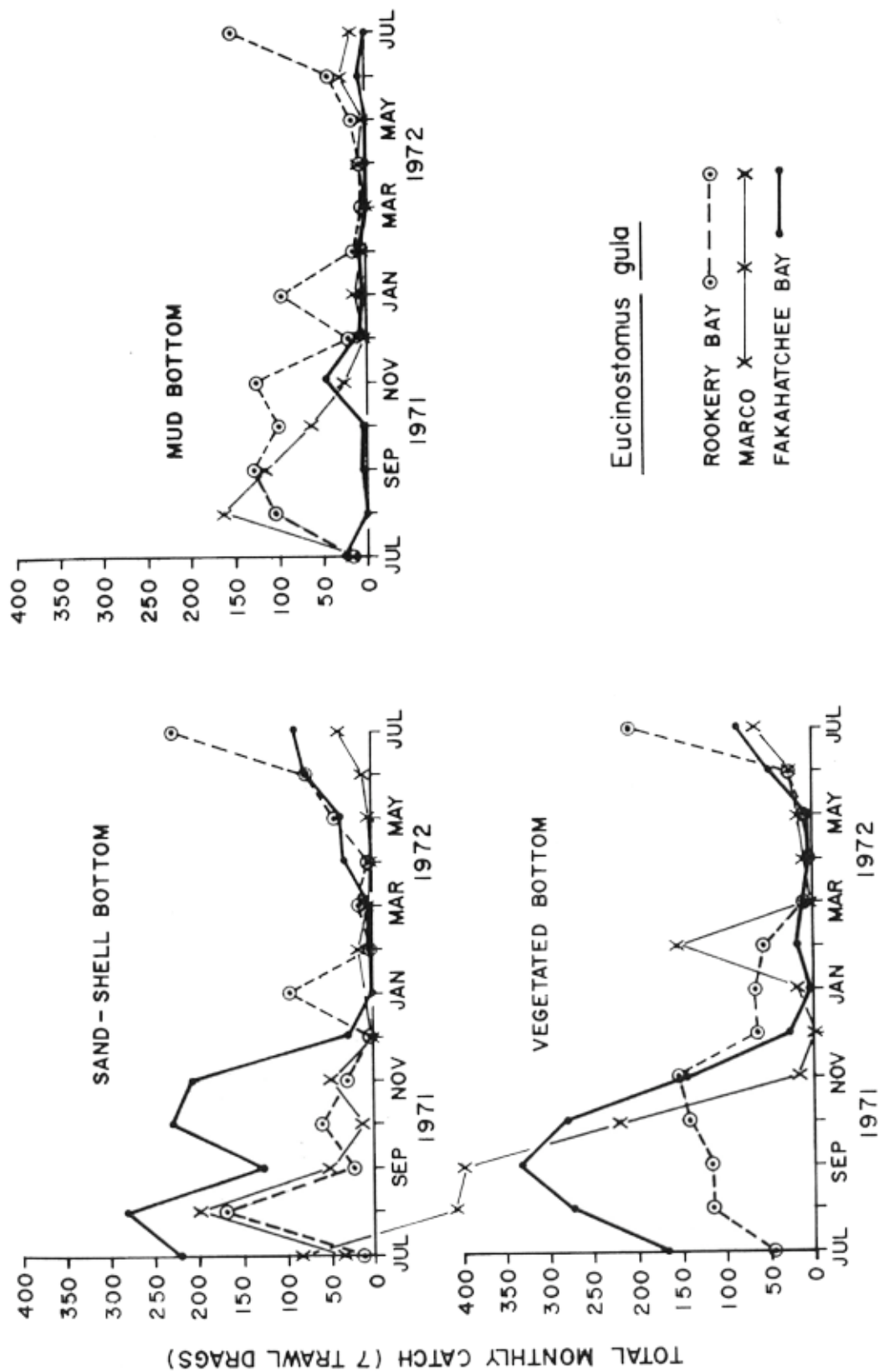
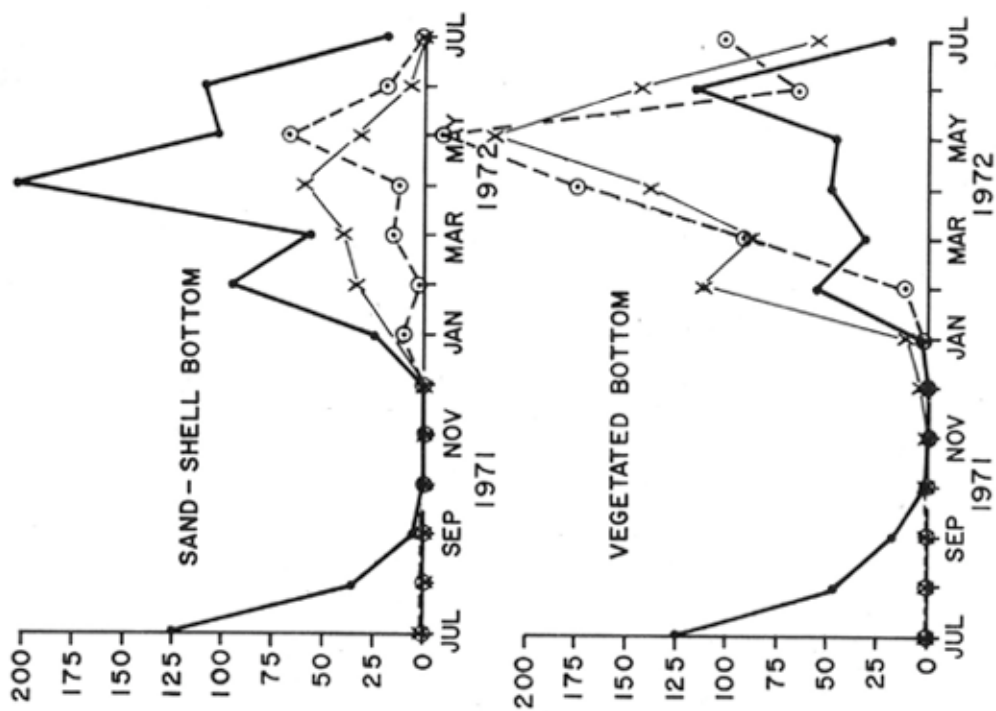


Figure 11. Total monthly trawl catches of *Eucinostomus gula* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

TOTAL MONTHLY CATCH (7 TRAWL DRAGS)



Orthopristis chrysoptera

- ROOKERY BAY ○ --- ○  
 MARCO X --- X  
 FAKAHATCHEE BAY ● --- ●

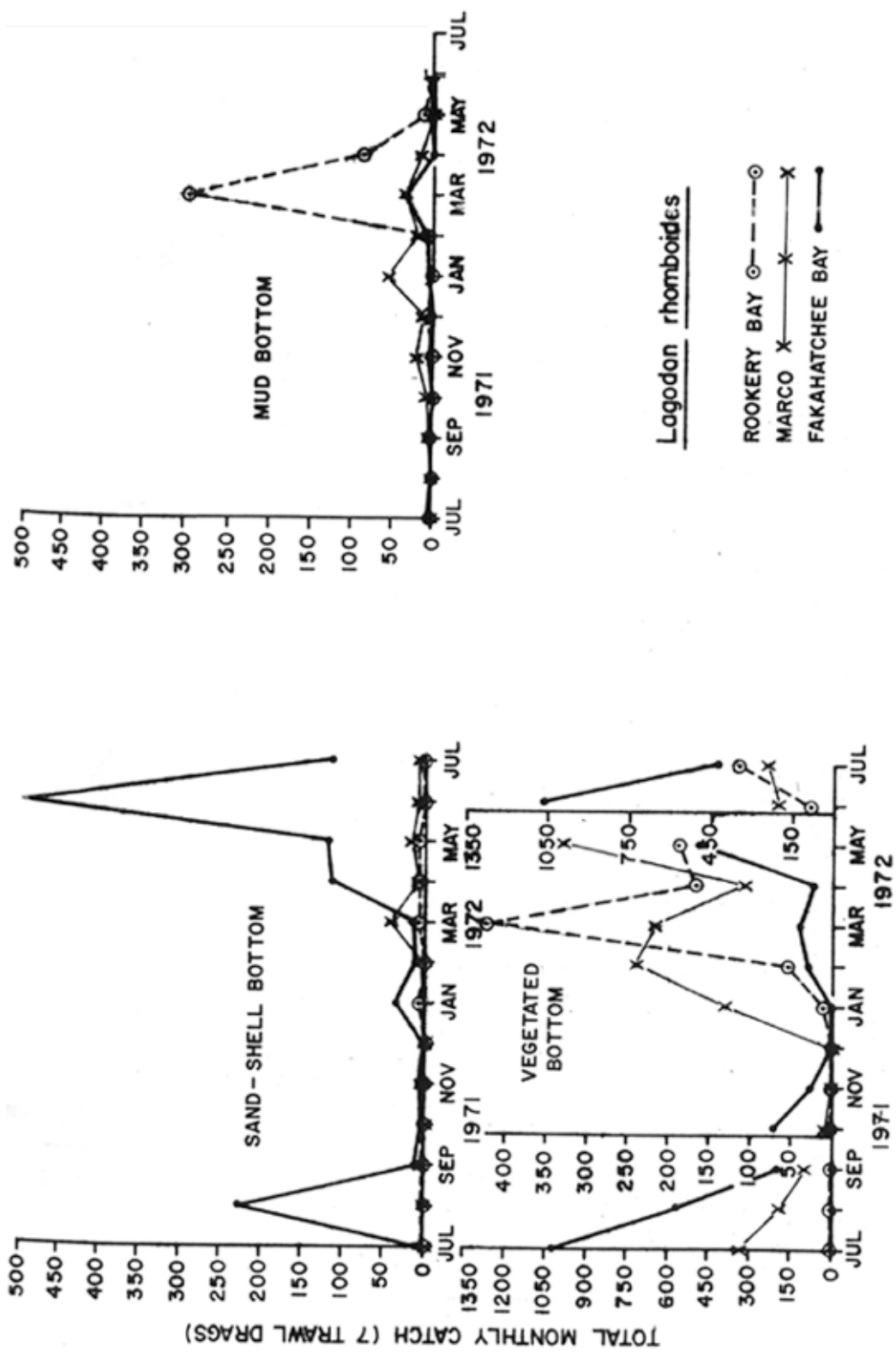


Figure 13. Total monthly trawl catches of *Lagodon rhomboides* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

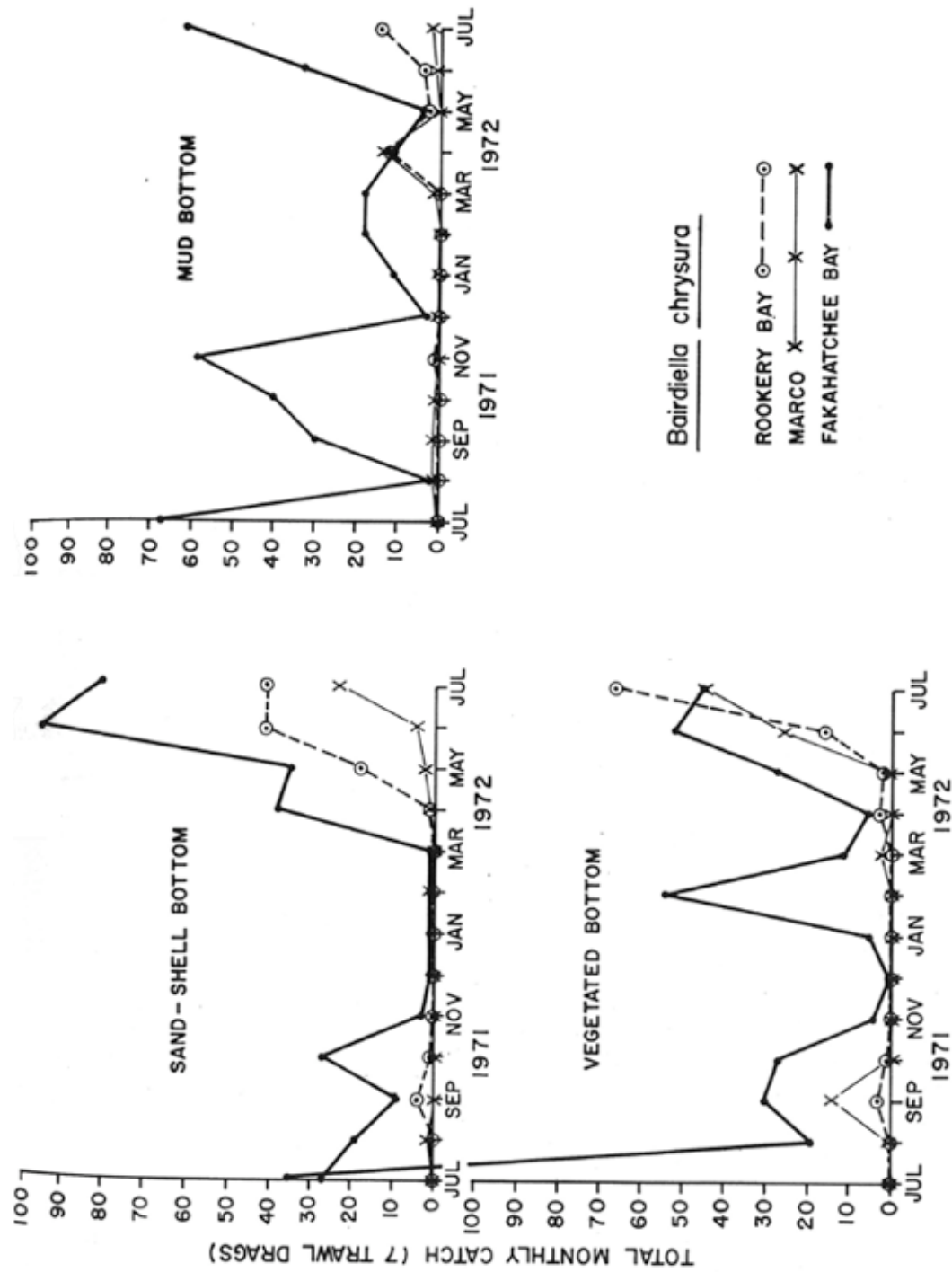


Figure 14. Total monthly trawl catches of *Bairdiella chrysura* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

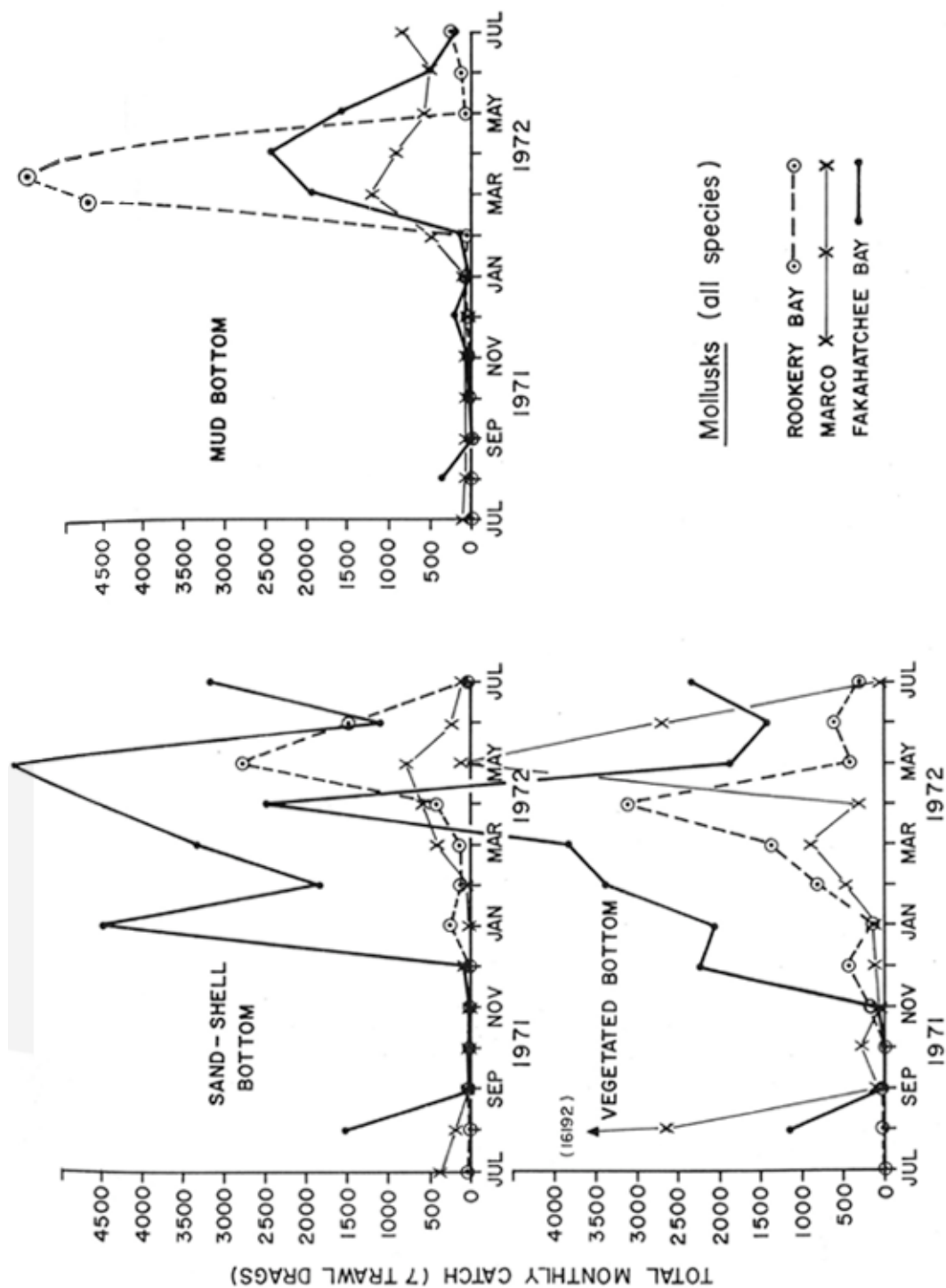


Figure 15. Total monthly trawl catches of mollusks from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

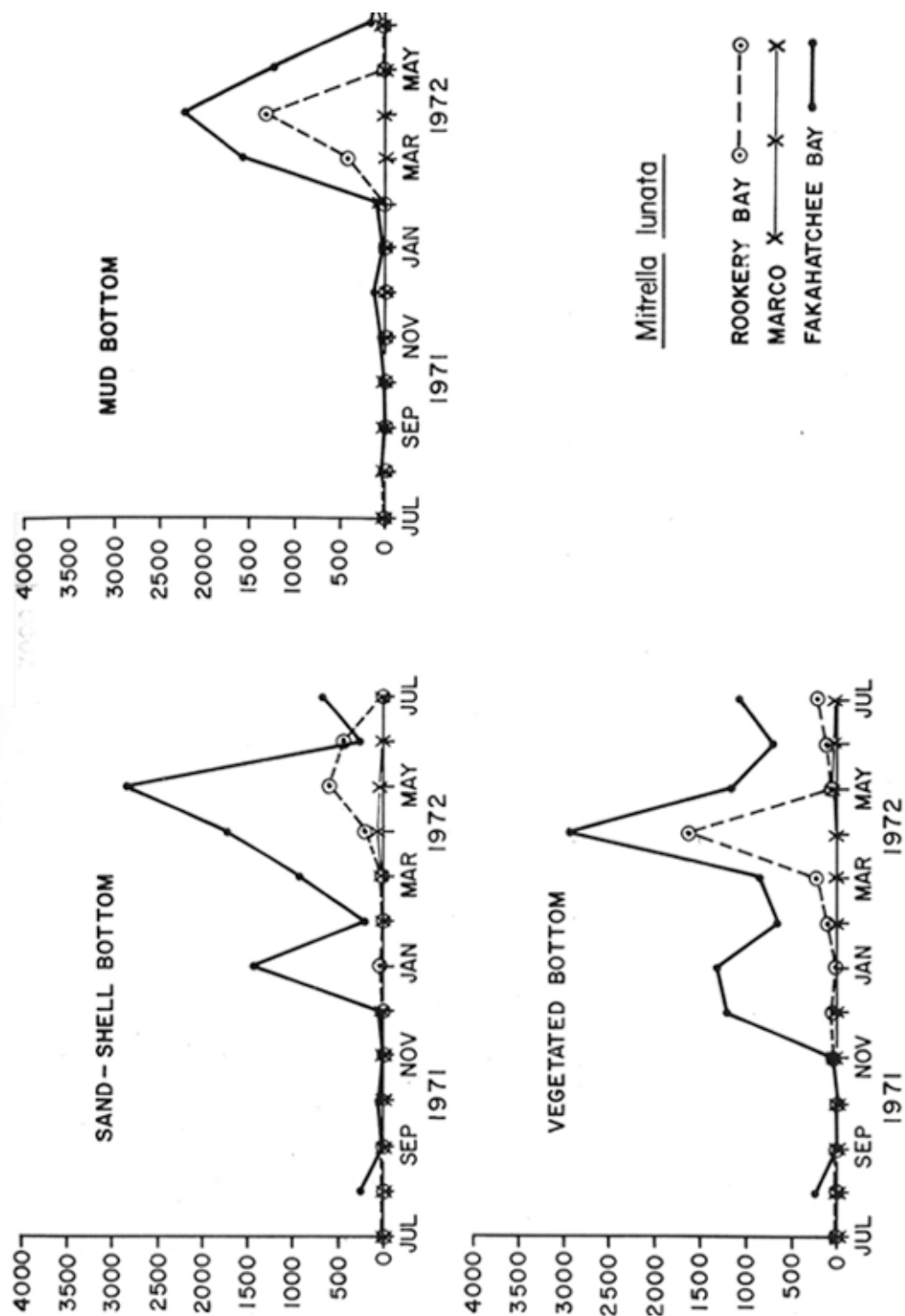


Figure 16. Total monthly trawl catches of *Mitrella lunata* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.



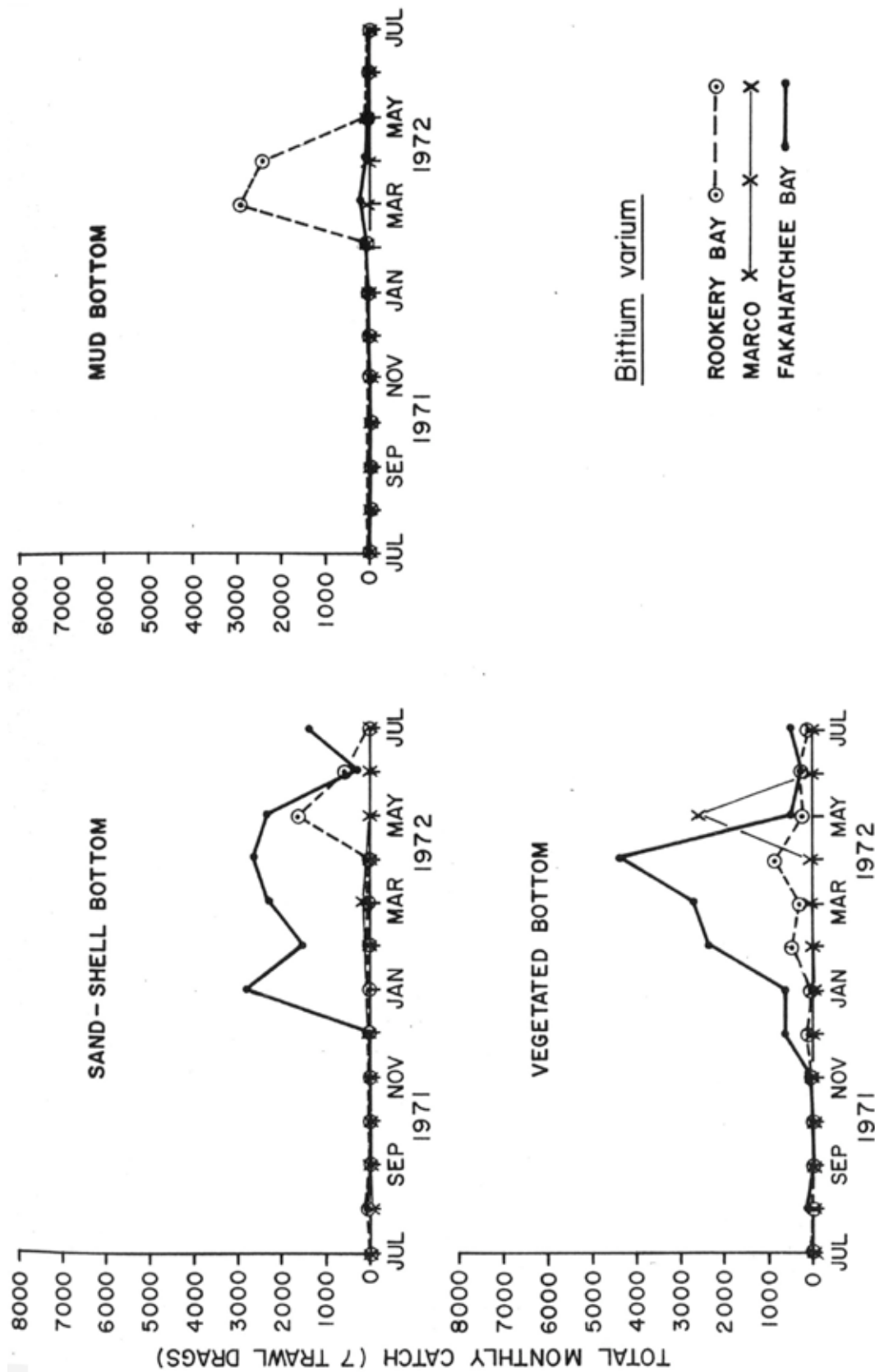


Figure 17. Total monthly trawl catches of *Bittium varium* from three habitat types in or near Rookery Bay, Marco Island and Fakahatchee Bay from July 1971 through July 1972.

