Decapoda: Palinura
**Betaeus longidactylus**

**CLASS**  
Crustacea

**ORDER**  
Decapoda

**NAME**

**APPROX. GEOGR. RANGE**

**BATHY. ZONE:**
(Shore, Piling, Dredged, Pelagic, etc.)

**OBVIOUS CHARACTERS**

<table>
<thead>
<tr>
<th>Exposure to Surf (or, if stated, to tidal currents)</th>
<th>Tidal Horizon (or depth if dredged)</th>
<th>Type of Bottom:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Exposed, semi-protected, sheltered)</td>
<td>(High, medium, low, extreme low, dredged)</td>
<td>(Reef, rocks, boulders, gravel, sand, mud)</td>
</tr>
</tbody>
</table>

**POSITION:**  
(On or under rocks, weed, in substratum, etc.)

**VEGETATION:**
(Bare, rock-weed, kelp, eel grass, etc.)

**ASSOCIATES, COMMENSALS:**

**BREEDING SEASON, COLOR IN LIFE, ETC.**

PBL SURVEY CARD—BUFF

CAPE FLATTERY TO PT. CONCEPTION
<table>
<thead>
<tr>
<th>Date</th>
<th>Region, Station, Position, Etc.</th>
<th>Bathymetric Zone</th>
<th>Depth or Tidal Horizon</th>
<th>Exposure to Wave Shock</th>
<th>Type of Bottom</th>
<th>Number Taken Or Observed</th>
<th>Ident (Or &quot;Field&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>93.1</td>
<td>Elkhorn Slough. On racks with serpulids and oysters. Scyphistoma station (Bennet Sl)</td>
<td>shore</td>
<td>low</td>
<td>Shelt</td>
<td>Rky</td>
<td>MacG</td>
<td>verbal</td>
</tr>
</tbody>
</table>

If additional space is needed, use unprinted 4 x 6 white cards.
**NAME**

_Betaeus harfordi_

**CLASS**

**ORDER** Decapoda

**FAMILY**

**APPROX. GEOGR. RANGE**

**BATHY. ZONE:**

(Shore, Piling, Dredged, Pelagic, etc.)

**OBVIOUS CHARACTERS**

<table>
<thead>
<tr>
<th>Exposure to Surf (or, if stated, to tidal currents)</th>
<th>Tidal Horizon (or depth if dredged)</th>
<th>Type of Bottom:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Exposed, Semi-Protected, Sheltered)</td>
<td>(High, Medium, Low, Extreme Low, Dredged)</td>
<td>(Reef, Rocks, Boulders, Gravel, Sand, Mud)</td>
</tr>
</tbody>
</table>

**POSITION:**

(On or under rocks, weed, in substratum, etc.)

**VEGETATION:**

(Bare, Rock, Weed, Kelp, Eel Grass, etc.)

**ASSOCIATES, COMMENSALS:**

**BREEDING SEASON, COLOR IN LIFE, ETC.:**

PBL SURVEY CARD—BUFF

CAPE FLATTERY TO PT. CONCEPTION
<table>
<thead>
<tr>
<th>Date</th>
<th>Region, Station, Position, Etc.</th>
<th>Bathymetric Zone</th>
<th>Depth or Tidal Horizon</th>
<th>Exposure to Wave Shock</th>
<th>Type of Bottom</th>
<th>Number Taken or Observed</th>
<th>Ident (or &quot;Field&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Febr. 18</td>
<td>Santa Cruz Munic. wharf piling</td>
<td>Piling</td>
<td>Low</td>
<td>Semi</td>
<td></td>
<td></td>
<td>96/990</td>
</tr>
<tr>
<td>1925</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Pinnixa tubicola Holmes**

- **CLASS**: Crustacea
- **ORDER**: Decapoda
- **FAMILY**: Pinnotheridae

**APPROX. GEOGR. RANGE**

**BATHY. ZONE:**
(Shore, Piling, Dredged, Pelagic, etc.)

---

### OBVIOUS CHARACTERS

<table>
<thead>
<tr>
<th>EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)</th>
<th>TIDAL HORIZON (OR DEPTH IF DREDGED)</th>
<th>TYPE OF BOTTOM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Exposed, Semi-protected, Sheltered)</td>
<td>(High, Medium, Low, Extreme Low, Dredged)</td>
<td>(Reef, Rocks, Boulders, Gravel, Sand, Mud)</td>
</tr>
</tbody>
</table>

**POSITION:**
(On or Under Rocks, Weed, in Substratum, Etc.)

**VEGETATION:**
(Bare, Rock-Weed, Kelp, Eel Grass, Etc.)

**ASSOCIATES, COMMENSALS:**

** BREEDING SEASON, COLOR IN LIFE, ETC.:**

---

PBL Survey Card—BUFF

CAPE FLATTERY TO PT. CONCEPTION
<table>
<thead>
<tr>
<th>Date</th>
<th>Region, Station, Position, Etc.</th>
<th>Bathymetric Zone</th>
<th>Depth or Tidal Horizon</th>
<th>Exposure to Wave Shock</th>
<th>Type of Bottom</th>
<th>Number Taken or Observed</th>
<th>Ident (or &quot;Field&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 122.1</td>
<td>South of Highlands Inn Big Sur road In terebellid tubes under boulders</td>
<td>Shore</td>
<td>Low</td>
<td>Semi</td>
<td>Rky</td>
<td></td>
<td>MacG ident. p.c. 11 Mch 1931 Glassell Jan 7 1934</td>
</tr>
<tr>
<td>No. 160.7</td>
<td>San Remo (Big Sur Rd) In terebellid tubes</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td>&quot;</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Opisthopus transversus Rathbun**

**CLASS** Crustacea

**ORDER** Decapoda

**FAMILY** Pinnootheridae

---

**APPROX. GEOGR. RANGE**

**BATHY. ZONE:**

(SHORE, PILING, DREDGED, PELAGIC, ETC.)

---

**OBVIOUS CHARACTERS**

<table>
<thead>
<tr>
<th>EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)</th>
<th>TIDAL HORIZON (OR DEPTH IF DREDGED)</th>
<th>TYPE OF BOTTOM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(EXPOSED, SEMI-PROTECTED, SHELTERED)</td>
<td>(HIGH, MEDIUM, LOW, EXTREME LOW, DREDGED)</td>
<td>(REEF, ROCKS, BOULDERS, GRAVEL, SAND, MUD)</td>
</tr>
</tbody>
</table>

**POSITION:**

(ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)

**VEGETATION:**

(BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)

**ASSOCIATES, COMMENSALS:**

**BREEDING SEASON, COLOR IN LIFE, ETC.:**

PBL SURVEY CARD—BUFF

CAPE FLATTERY TO PT. CONCEPTION
<table>
<thead>
<tr>
<th>Date</th>
<th>Region, Station, Position, Etc.</th>
<th>Bathymetric Zone</th>
<th>Depth or Tidal Horizon</th>
<th>Exposure to Wave Shock</th>
<th>Type of Bottom</th>
<th>Number Taken or Observed</th>
<th>Ident (or &quot;Field&quot;)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 122.3</td>
<td>Crml. On gills of Cryptochiton</td>
<td>Shore</td>
<td>Low</td>
<td>Semi</td>
<td>Rky</td>
<td>1</td>
<td>MacG card</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11 Mch 1931</td>
</tr>
</tbody>
</table>
**NAME**  
*Fabia subquadrata*

**CLASS**  
*Crustacea*

**ORDER**  
*Decapoda*

**FAMILY**  
*Pinnotheridae*

**APPROX. GEOGR. RANGE**

**BATHY. ZONE:**  
*shore*  
*(SHORE, PILING, DREDGED, PELAGIC, ETC.)*

*commensal in M. californianus.*

**OBVIOUS CHARACTERS**

<table>
<thead>
<tr>
<th>EXPOSURE TO SURF (OR, IF STATED, TO TIDAL CURRENTS)</th>
<th>TIDAL HORIZON (OR DEPTH IF DREDGED)</th>
<th>TYPE OF BOTTOM:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exposed</td>
<td>Middle to low, usually low</td>
<td>Rky (mussel beds)</td>
</tr>
<tr>
<td><em>(EXPOSED, SEMI-PROTECTED, SHELTERED)</em></td>
<td><em>(HIGH, MEDIUM, LOW, EXTREME LOW, DREDGED)</em></td>
<td><em>(REEF, ROCKS, BOULDERS, GRAVEL, SAND, MUD)</em></td>
</tr>
</tbody>
</table>

**POSITION:**
*(ON OR UNDER ROCKS, WEED, IN SUBSTRATUM, ETC.)*

**VEGETATION:**
*(BARE, ROCK-WEED, KELP, EEL GRASS, ETC.)*

**ASSOCIATES, COMMENSALS:**

**BREEDING SEASON, COLOR IN LIFE, ETC.:**

*Ovig. 2-19-25, Santa Cruz. Gray in color, with broad band of salmon running from rostrum to telson.*

**CAPE FLATTERY TO PT. CONCEPTION**