

Key to NEP Liljeborgiids - D. Cadien 23 Mar 2006 (adapted from Barnard 1959, and other sources). Note: While some liljeborgiids display differences in pigmentation and structure between juveniles and adults, and between sexes in the adult, the characters used in this key apply to both juveniles, and adults of both sexes

1. Carpus of G1 and G2 with strongly produced slender ventral lobe extending along hind margin of propodus.....*Liljeborgia* 2
 Carpus of G1 and G2 lacking produced ventral lobe.....*Listriella* 6
2. Telson cleft nearly to base, lobes with imbedded terminal spine; basis of P5-7 only 1-1.5x as long as wide; with eyes.....3
 Telson cleft only ¼ to 1/3, lacking terminal spines on telsonic lobes; basis of P5-7 more than twice as long as wide; blind.....5
3. Epimeron 1 concave above postero-ventral tooth....*Liljeborgia pallida* Bate 1857
 Epimeron 1 convex above postero-ventral tooth.....4
4. Cusps of telsonic lobes longer medially than laterally; eyes reniform.....
*Liljeborgia marcinabrio* Barnard 1969
 Cusps of telsonic lobes subequal to longer laterally than medially; eyes oval to subquadrate..... *Liljeborgia geminata* Barnard 1969
5. Pleonal segments 1-3 and urosomal segments 1 and 2 with large spine, dactyl of G2 not serrate.....*Liljeborgia* sp CS1 Cadien 2004§
 Pleonal segment 1 with small spine or spine absent, other pleonal and urosomal segments with spines large, small, or absent; dactyl of G2 serrate.....
*Liljeborgia cota* Barnard 1962
6. Lacking bands or spots of pigment; blind.....*Listriella albina* Barnard 1959
 With stripes, spots, or bars of pigment on pereonites, antennae, coxae, or legs, or some combination of these; eyed.....7
7. With pigment on the top of the head.....8
 Without pigment on the top of the head.....9
8. A band of pigment on article 2 of antenna 1.....*Listriella goleta* Barnard 1959
 No pigmented band on article 2 of antenna 1.....*Listriella eriopisa* Barnard 1959
9. Epimeron 3 subquadrate, with a small postero-ventral tooth.....
*Listriella* sp A SCAMIT 1987§
 Epimeron 3 rounded, with posterior notch, but lacking postero-ventral tooth.....
10
10. A band of pigment on article 2 of antenna 1.....*Listriella melanica* Barnard 1959
 No pigmented band on article 2 of antenna 1.....*Listriella diffusa* Barnard 1959

Family Sebidae

This small family is represented in the NEP by a single species from bathyal depths off British Columbia on the Endeavor Seamount – *Seba profunda* (Shaw 1989). We have never taken it, and never expect to take it. There is a tendency for vent associated animals to be more strongly restricted by presence of vents and sulfides than depth. Even so, it seems unlikely that this animal might show up at our local vent site (Station 0C) in 150m of water. In *Seba* the G1 and G2 are both chelate, with the G2 long and slender, and the G1 robust with a broad propod. This is well illustrated in Barnard and Karaman (1991).

Family Colomastigidae

A single species in the family is found in California waters. It has been identified as *Colomastix pusilla* Grube 1861 in previous literature for the area (Barnard 1955, 1958, 1969a). The local form is now recognized as different from Grube's species (Barnard & Karaman 1991), and no provisional name has been given it. It remains *Colomastix* sp., and is not recorded on the SCAMIT list. It is probably not the same species described by Barnard (1955) from Hawaii. It may be that here, as in other areas, a more discriminating look will find several colomastigid species unseparated in the past. The only other genus in the family is austral, *Yulumara*.

Colomastigids are quite small, and *Colomastix* spp. appear to all be associates of sponges or tunicates. In our waters they are usually reported from sponges. They have subequal, relatively short, antennae; a reduced urosome, simple G1, an enlarged G2 with inflated propod; small linear coxae, and eyes composed of multiple somewhat separated ommatidia; body is cylindrical or subcylindrical. In life several of the tropical western Atlantic species have distinctive color patternings which are lost in preservation.

Literature Cited

- Barnard, J. Laurens. 1955. Gammaridean Amphipoda (Crustacea) in the collections of Bishop Museum. *Bernice P. Bishop Museum, Bulletin*, 215: 1-46.
- . 1958. Index to the families, genera, and species of the gammaridean Amphipoda (Crustacea). *Allan Hancock Foundation Publications, Occasional Paper*, 19: 1-145.
- . 1959. Liljeborgiid amphipods of Southern California coastal bottoms, with a revision of the family. *Pacific Naturalist* 1(3/4): 12-28.
- . 1962b. Benthic marine Amphipoda of Southern California; 2. Families Tironidae to Gammaridae. *Pacific Naturalist* 3(2): 73-115.
- . 1966. Submarine canyons of Southern California. Part V - Systematics: Amphipoda. *Allan Hancock Pacific Expeditions* 27(5): 1-166.
- 1969a. Gammaridean Amphipoda of the rocky intertidal of California: Monterey Bay to La Jolla. *United States National Museum, Bulletin*, 258: 1-230.
- 1969b. A biological survey of Bahia de los Angeles, Gulf of California, Mexico. IV. Benthic Amphipoda (Crustacea). *Transactions of the San Diego Society of Natural History* 15(13): 175-228.

- , and Gordan S. Karaman. 1991. The Families and Genera of Marine Gammaridean Amphipoda (except Marine gammaroids)[parts 1 and 2]. *Records of the Australian Museum Supplement* 13: 1-866.
- Bousfield, E. L., and C.-t. Shih. 1994. The Phyletic Classification of Amphipod Crustaceans: Problems in Resolution. *Amphipacifica* 1(3): 76-133.
- Lincoln, Roger J. 1979. *British Marine Amphipoda: Gammaridea*. London: British Museum (NH). 658pp.
- McLaughlin, Patsy A., David K. Camp, Martin V. Angel, Edward L. Bousfield, Pierre Brunel, Richard C. Brusca, Donald B. Cadien, Anne C. Cohen, Kathleen Conlan, Lucius G. Eldredge, Darryl L. Felder, Joseph W. Goy, Todd A. Haney, Brenda Hann, Richard W. Heard, Ed A. Hendrycks, Horton H. Hobbs III, John R. Holsinger, Brian Kensley, Diana R. Laubitz, Sara E. LeCroy, Rafael Lemaitre, Rosalie F. Maddocks, Joel W. Martin, Paula Mikkelsen, Eliszbeth Nelson, William A. Newman, Robin M. Overstreet, William J. Poly, W. Wayne Price, Janet W. Reid, Andrew Robertson, D. Christopher Rogers, Arnold Ross, Marilyn Schotte, Frederick R. Schram, Chiang-Tai Shih, Les Watling, and George D. F. Wilson. 2005. *Common and Scientific Names of Aquatic Invertebrates from the United States and Canada - Crustaceans*. Bethesda, Maryland, U. S. A.: American Fisheries Society Special Publication 31. 545pp.
- Shaw, Patrick. 1989. New amphipods from geothermal vent sites off the west coast of Vancouver Island, British Columbia, with a reappraisal of the amphipod family Sebidae. *Canadian Journal of Zoology* 67: 1882-1890.