

FIG. 9. *Gnorimosphaeroma noblei* Menzies. A. Maxilliped. B. Second pereopod. C. Seventh pereopod. D. Third pereopod. E. First pereopod. Figures with similar magnification: A, C, E; B, D.

plumose marginal setae, endopod with about five plumose marginal setae. Exopod of second pleopod with about 18 plumose marginal setae, endopod with about nine plumose marginal setae. Exopod of third pleopod with about 21 plumose marginal setae, endopod with about 11 plumose marginal setae, exopod biarticulate. Exopod of fourth pleopod with six plumose apical setae, endopod lacks plumose setae.

Peraeon: Dorsal surface smooth. Faint lines mark the place where the coxal plates are fused with the second to seventh peraeonal somites inclusive.

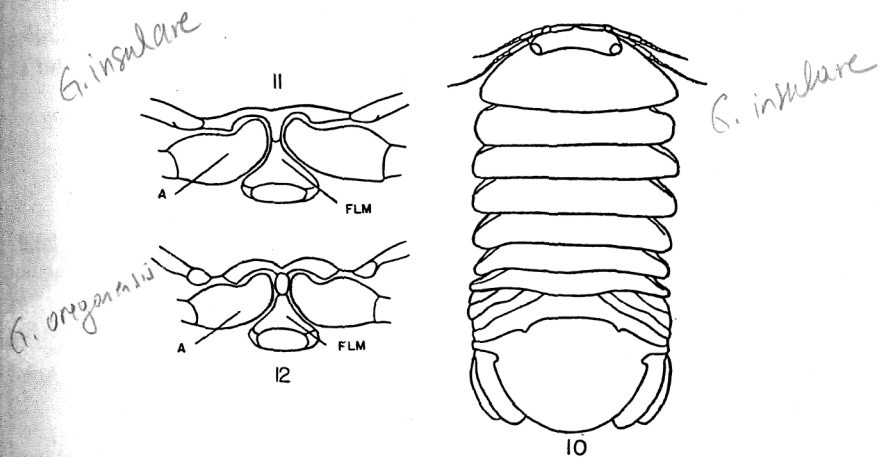
Pleotelson: Dorsal surface smooth. Apex of telson bluntly rounded, uropods not extending beyond the posterior margin.

MEASUREMENTS: Holotype male: length, 2.9 mm.; width (at second peraeonal somite), 1.4 mm. Allotype, ovigerous: length, 2.0 mm.; width, 0.9 mm.

ECOLOGY: The ecology of this species is rather interesting. The animals were found under stones and rocks in the upper part of the intertidal zone. High in their ecologic range they were found in association with the halophil terrestrial isopod *Armadilloniscus*; unlike the latter, however, the sphaeromids were also found to about the mean high-water line under barnacle-encrusted rocks and were excellent swimmers.

DISTRIBUTION: Known only from type locality.

TYPE LOCALITY: From the town of Marshall southward along Tomales



FIGS. 10, 11. *Gnorimosphaeroma insulare* (Van Name). 10. Dorsal view (length of specimen, 8 mm.). 11. Dorsal view, frontal margin, bases of first antennae (A), and frontal lamina (FLM).

FIG. 12. *Gnorimosphaeroma oregonensis* (Dana)?, frontal margin, same details as in figure 11. After Van Name, 1940.

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Bay, Marin County, California. The species, thus far, has been collected only at the following places in Tomales Bay: Marshall, holotype, allotype, and two males, two females (ovigerous), February 14, 1948 (R. J. Menzies), under rocks with *Armadilloniscus holmesi* Arcangeli; three males, four females (three ovigerous), May 2, 1952 (R. J. Menzies and M. A. Miller), under rocks covered by barnacles; 1 mile south of Marshall, two males, 12 females (two ovigerous), February 19, 1949 (R. J. Menzies), upper intertidal zone under rocks with a green nemertine worm; Shell Beach, one male, 67 females (65 ovigerous), May 3, 1952 (R. J. Menzies, Lloyd Tevis, and M. A. Miller), upper intertidal, under rocks, with *Armadilloniscus coronacapitalis* Menzies.

LOCATION OF TYPES: The holotype (A.M.N.H. No. 11549), allotype (A.M.N.H. No. 11550), and 71 paratypes (A.M.N.H. No. 11551) are in the American Museum of Natural History. Fourteen paratypes are in the Museum of the Department of Zoology, University of California, Davis, California, and seven paratypes are in the United States National Museum.

REMARKS: This species can be separated from other members of the genus by the arrangement of the somite incisions on the second pleonal somite, by the absence of a true lacinia mobilis, by the approximation of the first articles of the peduncle of the first antennae on the midline, and by the fact that the dorsal surface of the animal lacks tubercles or rugosities. The species is named in honor of Dr. Alden E. Noble, Director, Pacific Marine Station, College of the Pacific, Dillon Beach, California, in appreciation of his constant encouragement of the writer's work on isopods.

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