Stenothoe valida Dana

(Plate 15)

Stenothoe validus Dana (1852), Amer. Jour. Sci., ser. 2, vol. 14, p. 311; Dana (1853), U.S. Expl. Exped., vol. 14 II, pp. 924-925, pl. 63, figs. 1a-o; Bate (1862), Catalogue Amphipodous Crustacea, Brit. Mus., pp. 60-61, pl. 9, fig. 6.

Probolium polyprion Costa (1853), Rend. Real. Acad. Sci. Soc. Reale Borbonica, n.s., vol. 2, p. 173; Costa (1857), Amfip. Napoli, p. 199, pl. 2, fig. 3 (not seen).

Probolium megacheles Heller (1866), Denk. Akad. Wiss. Wien, vol. 26, pp. 13-14, pl. 2, figs. 1-2.

Montagua Miersii Haswell (1880), Proc. Linn. Soc. N.S.W., vol. 4, p. 323, pl. 24, fig. 4; Haswell (1882), Catalogue Austral..... Crustacea. Austral. Mus., p. 226.

Montagua longicornis Haswell (1880), Proc. Linn. Soc. N.S.W., vol. 4, pp. 323-324, pl. 24, fig. 5; Haswell (1882), Catalogue Austral..... Crustacea. Austral. Mus., p. 226.

Probolium miersii, Chilton (1885), Proc. Linn. Soc. N.S.W., vol. 9, pt. 4, p. 1043.

Stenothoe adhaerans, Chilton (1891), Trans. N.Z. Inst., vol. 24, pp. 259-260 (not Stebbing, 1888, Rep. Sci. Res. HMS Challenger, vol. 29, p. 199).

Stenothoe ornata K. H. Barnard (1930) was distinguished by the denticulate ornamentation of coxae 3 and 4. Specimens at hand show a series of submarginal coxal ridges running at right angles to the margins plus minute, submarginal setules. These ridges compare favorably with those figured by Barnard for *Proboloides perlatus* (to which he makes reference, fig. 15). Barnard also refers to S. *ornata* as a possible synonym of *Stenothoe miersii* (Haswell) which Chilton (1923) considered a synonym of S. *valida*.

Chilton (1923) pointed out that Kunkel's (1910) female of *Stenothoe marina* (Bate) showed gnathopod 2 identical to some of his specimens of S. *valida* and this is true of the material at hand.

Kunkel's *Stenothoe valida* is considered dubious by the writer and should be reexamined for other affinities because of the shape of the second article of the ramus of uropod 3 and the teeth on the palm of gnathopod 2.

Stenothoe aucklandicus Stephensen (1927, Vid. Medd. Dansk Nat. Foren., vol. 83, p. 311) was based on female specimens but differs from females of material at hand by the shorter palm of gnathopod 2, plus defining spines; the cusp is situated at the middle of the palm rather than near the finger hinge. The writer considers S. *aucklandicus* to be a valid species.

As Chilton (1923) suggested, S. *dollfusi* Chevreux (1891, Bull. Soc. Zool. France, vol. 16, pp. 260-262, figs. 6-10) may be a form of S. *valida* although intergradations of the teeth of the male gnathopod 2 have not been described. The palm of the female gnathopod 2 is rather strongly excavated just proximal to the finger hinge and the ramus of uropod 2 is longer than the peduncle (see Chevreux and Fage, 1925, Faune de France, vol. 9, p. 135.)

Stenothoe valida as noted by Schellenberg (1938) appears to be S. *cattai* Stebbing (1906). This fact was ascertained when the writer examined more than twenty lots of *Stenothoe* from the Hawaiian Islands (lent through the courtesy of Dr. C. H. Edmondson, Bernice P. Bishop Museum) and found all of them to be S. *cattai,* a closely related species.

The males of the two species may be distinguished in the following ways: (1) the geniculate and ridged second article of the third uropodal ramus in S. *cattai*: in S. *valida* this article is straight and styliform; (2) the shape of the teeth on the palms of the second gnathopod differs slightly; (3) the third coxa of S. *valida* is very broad, while in S. *cattai* it is narrow, the sides being nearly parallel.

The female of *S. cattai* differs from the male by the straight, stylus-like second article of uropod 3, similar to both males and females of *S. valida*, a factor which may have led to confusion between the two species.

The females of *S. cattai* and *S. valida* may be distinguished by the following characters: (1) presence of a small, distal palmar tooth on gnathopod 2 of *S. valida;* (2) the lack of palmar defining spines on gnathopod 2 of *S. valida;* (3) the broader coxa 3 of *S. valida*. The latter character difference is not so pronounced in the females of the two species as in the males, the third coxal plate in the female of *S. valida* being intermediate in size between the male of *S. valida* and both sexes of *S. cattai*.

Stenothoe valida, Della Valle (1893), Fauna Flora Golfes Neapel, vol. 20, pp. 566-568, pl. 58, figs. 74-78 (in part); Stebbing (1906), Das Tierreich, vol. 21, p. 194; Chevreux (1913), Bull. Inst. Oceanog., Monaco, no. 262, pp. 2-3; Chilton (1923), Rec. Austral. Mus., vol. 14, no. 2, pp. 95-100, fig. 5; Chevreux and Fage (1925), Faune de France, vol. 9, pp. 137-138, fig. 137 Hale (1927), Trans. Roy. Soc. So. Austral., vol. 51, p. 314, fig. 3; Schellenberg (1928), Trans. Zool. Soc. London, vol. 22, pt. 35, p. 641.

Stenothoë valida, Graeffe (1902), Arb. Zool. Inst. Univ. Wien, vol. 13, p. 22.

Stenothoe micrsii, Stebbing (1906), Das Tierreich, vol. 21, p. 200; Stebbing (1910), Austral. Mus., Mem. 4, vol. 2, pt. 12, p. 637.

Stenothoe assimilis Chevreux (1908), Bull. Inst. Oceanog., no. 113, pp. 4-8, figs. 4-6; Barnard (1925), Ann. So. African Mus., vol. 20, pt. 5, pp. 345-346.

Stenothoë assimilis, Walker (1910), Proc. U.S. Nat. Mus., vol. 38, no. 1767, pp. 621-622, fig. 1.

Stenothoë validus, Walker (1910), Ann. Mag. Nat. Hist., ser. 8, vol. 6, pp. 31-32.

Stenothoe ornata Barnard (1930), Brit.-Antarctic Exped. 1910, Nat. Hist. Repts., Zool., vol. 8, p. 341, fig. 16.

Stenothoe valida, Chevreux (1935), Res. Camp. Sci. Monaco, fasc. 90, p. 81.

Not *Stenothoe valida*, Kunkel (1910), Trans. Conn. Acad. Arts Sci., vol. 16, pp. 16-19, fig. 5.

Not *Stenothoe valida*, Schellenberg (1938), Kungl. Svensk. Vetensapakad. Handl., ser. 3, vol. 16, no. 6, p. 21 (=*S. cattai* Stebbing).

MATERIAL EXAMINED. — Los Angeles-Long Beach Harbor, 28 lots on the hydroid *Tubularia crocea* (Agassiz), collected between April, 1950 and September, 1951.

REMARKS. — The large synonymy of this species has been due in part to the statement by Dana (1853) that the second article of the third peraeopod was as broad as those of peraeopods 4 and 5, thus leading Chevreux (1908) to describe *Stenothoe assimilis*. Walker (1910) and Chevreux (1913) pointed out the error made by Dana, the second article of peraeopod 3 being very slender.

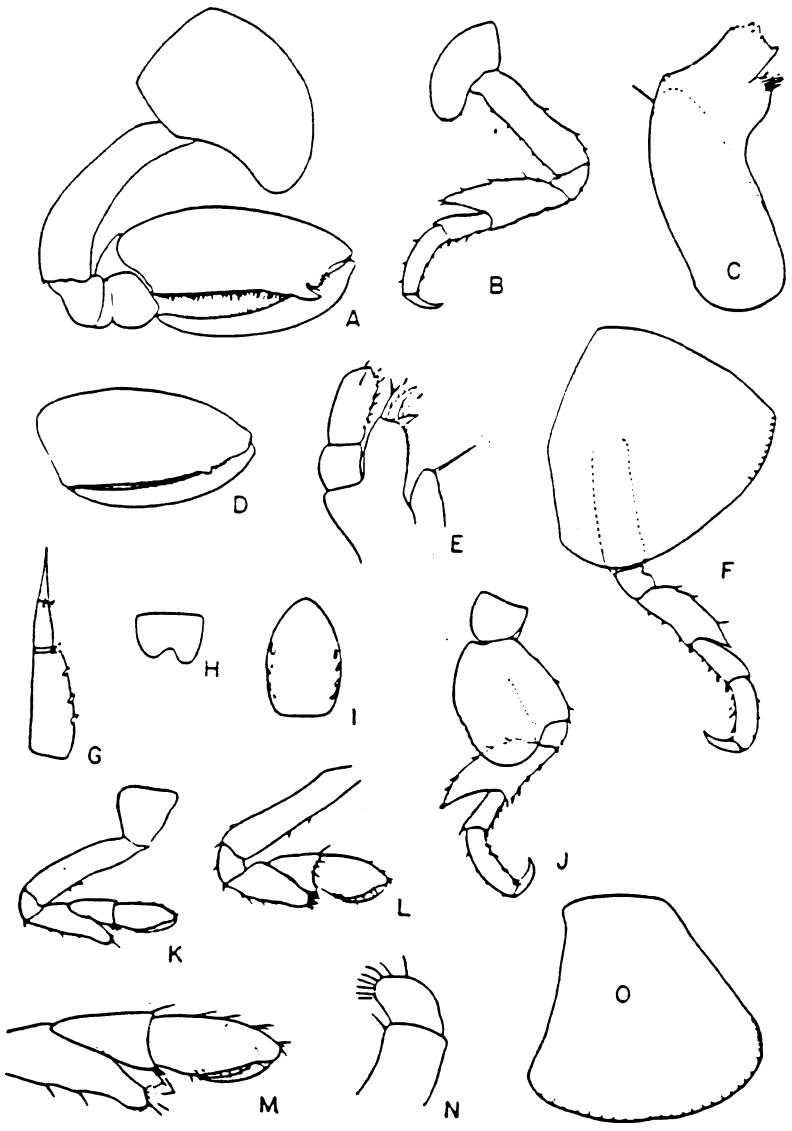

PLATE 15

Stenothoe valida Dana

Male, 6 mm. Fig. a, gnathopod 2; b, peræopod 3; c, mandible; e, maxilla 1; f, peræopod 2; g, uropod 3; h, upper lip; i, telson; j, peræopod 5; k, gnathopod 1; m, end of gnathopod 1, enlarged; n, maxilla 2; o, coxa 3. Female, 4 mm. Fig. d, end of gnathopod 2, enlarged; l, gnathopod 1.