

Figure 14. *Leirolambrus nitidus* Rathbun. A. male, R/V *Pillsbury* Sta. P-615, off Punta Gorda, Belize, Gulf of Honduras, dorsal view; B. same, ventral view; C. female, R/V *Pillsbury* Sta. P-1302, off Hispaniola, dorsal view; D. same, ventral view. Scale lines = 5 mm.

denticulate or granulate margins. Lateral spines strong, acuminate, directed outward or slightly backward, and upward; several small, widely separated granules on posterior margin. Branchial angle of posterolateral margin often with small tubercle; latter sometimes pointed, marking end of branchial ridge. Extremities of posterior margin either angular or marked with small tooth.

Chelipeds narrow, lower surface smooth, upper surface with scant marginal fringe of hair. Arm with upper convex, scabrous, anterior margin armed with many small denticulate teeth, three or four being noticeably larger and sometimes spiniform; posterior margins evenly denticulate, terminating in spine distally. Outer margin of wrists denticulate, often with two distinct, forward-pointing spinules; inner margin granulate, with longitudinal line of granules through middle of upper surface. Hand with denticulate inner and outer margins, granules along outer margin of upper surface; large spine at terminal third, directed distally; prehensile edge finely toothed. Fingers of larger claw with small gape. Last three pairs of ambulatory legs reaching beyond distal margin of arm; first pair barely reaching dactylus of second pair. Legs almost

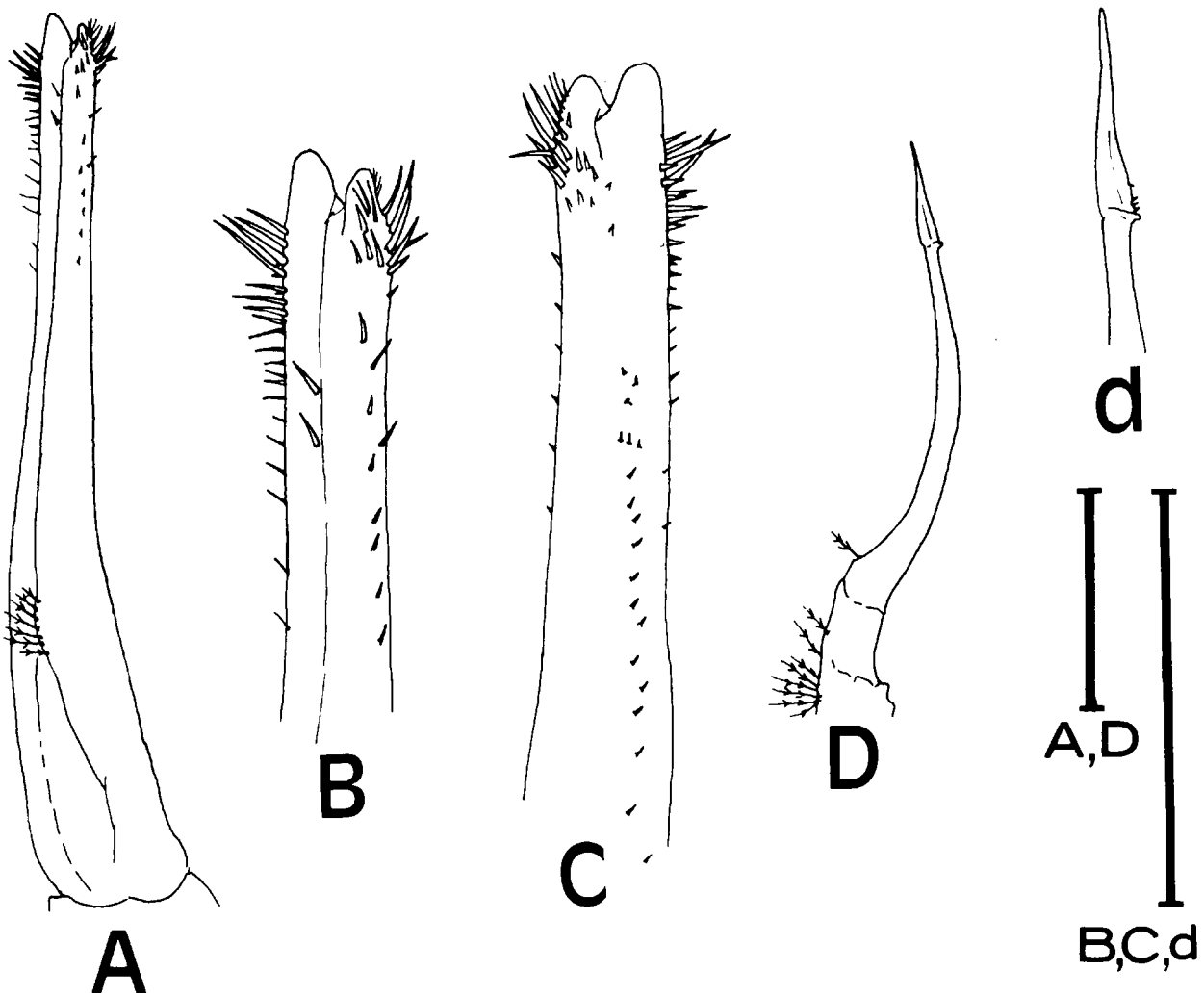


Figure 15. Major and minor gonopods (pleopods 1 and 2) of male *Leiolambrus nitidus* Rathbun, southeastern Caribbean specimen, R/V Pillsbury Sta. P-696: A. major gonopod, medial view; B. same, detail of distal portion; C. same, ventral view, detail of distal portion; D. minor gonopod, mesioventral view; d. same, detail of distal portion. Scale lines = 1 mm.

smooth; lower margin of meral joints very finely denticulate, almost serrate; other segments unarmed; dactylus wide, dorsoventrally flattened, spatulate, longer than propodi.

Abdominal somites 3-5 fused in male, separated in female. Gonopods as illustrated (Figure 15).

Type-locality: Mayaquez Harbor, Puerto Rico; 12-18 fms (22-33 m); holotype USNM 23776.

Distribution: Gulf of Mexico from off Freeport, Texas to off the eastern bank of the Mississippi River delta; Jamaica, Hispaniola, Puerto Rico, and Virgin Islands; Central America off Honduras and Nicaragua; Venezuela, Surinam and Guyana; 12-73 m.

East Pacific analogue: *Leiolambrus punctatissimus* (Owen, 1839) (*fide* Rathbun, 1925, and Garth, 1958).

Remarks: Holthuis (1959) noted that the small tubercle on the posterolateral margin at the end of the branchial ridge was a distinct tooth in his specimens from Surinam. We have seen one specimen, a male collected by R/V *Pillsbury* from off Isla de Margarita, north coast of Venezuela, which also agrees with those features mentioned by Holthuis. In our specimen, the branchial ridge terminates in a distinct blunt spine, and the posterior margin is marked by a small tooth. The possibility exists that these forms from along the northern coast of South America may be exhibiting subspecific variation from the more typical *L. nitidus* of the upper Caribbean. Other material collected by R/V *Pillsbury* from Yucatan and Hispaniola which we examined did not exhibit well-developed branchial ridge spines. However, the possibility cannot be dismissed that simple sexual variation in this spination is what we have observed, because variation of this type has been noted in other parthenopids, such as species of *Solenolambrus* noted earlier in this report.

Guinot-Dumortier (1960) provided figures of the major gonopod of a male collected from French Guiana, and, as shown by a comparison with our figures, the gonopod of that specimen is only slightly less spinulose than the gonopod of our specimen. Our comparative material in this instance was collected by R/V *Pillsbury* in the same general area as was Guinot-Dumortier's specimen. The minor variation in gonopod spinulation emphasizes the care necessary in dealing with this feature as a taxonomic character (*e.g.*, see *Parthenope fraterculus*).

Genus *Parthenope* Weber, 1795

Parthenope Weber, 1795, p. 92 [not *Parthenope* Fabricius, 1798, pp. 315, 352 (as established in Opinion 696, ICZN, Bull. Zool. Nomencl., 1963, pp. 94-96)].

Parthenope agona (Stimpson, 1871)

Figures 16, 17 E-h, 18

Lambrus agonus Stimpson, 1871a, p. 131; A. Milne Edwards, 1878, p. 151, pl. 28, fig. 3-3c; Kingsley, 1879, p. 150 [discussion]; A. Milne Edwards, 1880b, p. 4; Miers, 1886, p. 94 [listed]; Smith, 1886, p. 628 [24]; Rathbun, 1898, p. 261 [listed]; 1900, p. 514 [key]; 1901, p. 79; A. Milne Edwards and Bouvier, 1923, p. 354, text-fig. 13, pl. 10, fig. 2; Flipse, 1930, p. 83 [listed].

Lambrus (Lambrus) agonus: Young, 1900, pp. 102 [key], 104.

Parthenope agona: Hay and Shore, 1918, p. 462, pl. 39, fig. 5.

Parthenope (Parthenope) agonus: Rathbun, 1925, pp. 512 [key], 513, text-fig. 146, pls. 178, 179, pl. 275, figs. 1-3; Boone, 1930, p. 115, pl. 35; Rathbun, 1933, pp. 38 [key], 39; Springer and Bullis, 1956, p. 22 [listed]; Bullis and Thompson, 1965, p. 13 [listed]; Lewis, 1965, pp. 1053, 1072 [listed]; Türkay, 1968, p. 254.

Parthenope (Parthenope) agona: Garth, 1958, pp. 436, 438 [discussion]; Williams, 1965, p. 266, text-figs. 246, 252a; W. Pequegnat, 1970, pp. 173 [listed], 183; W. Pequegnat et al., 1971, p. 3 [listed], pl. 1, map C; L. Pequegnat, 1975, p. 48 [listed].

Material examined: HOURGLASS STATION A: 1 ♀, molt, not measured; 2 November 1967; trawl; FSBC I 15010. — HOURGLASS STATION C: 1 ♂, 12.5; 5 October 1967; dredge; FSBC I 15011. — HOURGLASS STATION D: 1 ♂, 7.1; 1 ♀, 12.8, ovigerous; 4 January 1966; trawl; FSBC I 1574. — 1 ♂, 6.8; 1 juv., 3.8; 3 May 1966; dredge; FSBC I 15012. — 1 ♀, damaged; 11 June 1966; trawl; FSBC I 15013. — 2 ♂, 12.1, damaged; 3 ♀, 5.1-6.4; 3 July 1966; trawl; USNM 165488. — 1 ♂, 8.9; 3 ♀, 4.9-9.9; 12 July 1966; dredge; SIFP 89:2527. — 6 ♂, 6.0-8.4; 5 ♀, (1 ovigerous, 6.3) 5.9-8.3; 2 August 1966; dredge; FSBC I 3610. — 1 ♂, 11.9; 4 ♀, (2 ovigerous, 9.5-13.8) 12.0-13.1; 9 October 1966; dredge; USNM 156489. — 1 ♂, 14.1; 6 ♀, (2

ovigerous, 9.3-12.0) 10.1-12.1; 9 October 1966; trawl; MNHNP acc. no. 7667. — 2 ♂, 9.5-12.5; 1 ♀, 15.8; 19 October 1966; dredge; RNHL D 31404. — 1 ♀, 7.5; 9 November 1966; trawl; FSBC I 15014. — 1 ♀, 12.8, ovigerous; 21 January 1967; dredge; SIFP 89:2653. — 1 ♀, 12.0; 6 February 1967; dredge; FSBC I 15015. — 1 ♂, 12.1; 6 February 1967; trawl; FSBC I 15016. — 1 ♂, crushed; 1 ♀, 8.1; 28 February 1967; dredge; FSBC I 15017. — 1 ♂, 14.1; 1 ♀, 11.0; 3 March 1967; dredge; SIFP 89:2543. — 1 ♂, 9.5; 1 ♀, crushed; 4 April 1967; trawl; FSBC I 15018. — 4 ♀, 8.6-15.5; 2 juvs., 2.4-4.8; 4 April 1967; dredge; FSBC I 15019. — 1 ♂, molt; 12 May 1967; trawl; FSBC I 15020. — 1 ♂, 6.6; 1 ♀, 4.8; 5 juvs., 2.6-2.8; 21 May 1967; dredge; FSBC I 15021. — 2 ♂, 11.2-11.5; 1 ♀, 7.0; 3 June 1967; trawl; FSBC I 15022. — 1 ♂, 11.9; 21 June 1967; dredge; FSBC I 15023. — 2 ♀, 4.6, crushed; 2 July 1967; dredge; FSBC I 15024. — 4 ♀, 4.5-6.8; 12 July 1967; dredge; FSBC I 15025. — 4 ♂, 8.1-14.0; 3 ♀, 8.8-12.3; 2 August 1967; dredge; SIFP 89:2532. — 4 ♂, 8.8-12.3; 1 ♀, 7.8; 2 August 1967; trawl; USNM 156496. — 1 ♂, 9.1; 3 ♀, 14.8-15.8; 1 juv., 3.5; 1 September 1967; trawl; SIFP 89:2531. — 2 ♂, 10.8-13.4; 5 ♀, 5.9-12.1; 1 September 1967; dredge; SIFP 89:2529. — 1 ♂, 4.3; 12 September, 1967; dredge; FSBC I 15026. — 3 ♀, (1 ovigerous, 8.3) 8.1, crushed; 6 October 1967; trawl; FSBC I 15027. — 5 ♂, 4.6-8.5; 5 ♀, (1 ovigerous, 8.0) 6.1-9.0; 1 juv., 3.5; 6 October 1967; dredge; USNM 156499. — 2 ♂, 8.6-12.0; 12 ♀, (4 ovigerous, 11.1-15.6) 9.6-15.5; 3 November 1967; trawl; MHNG. — 1 ♂, 11.3; 3 ♀, (2 ovigerous, 12.5-14.3) 14.8; 21 November 1967; dredge; UZMC 15.I.1977. — HOURGLASS STATION E: 1 ♀, 15.9; 4 December 1965; trawl; FSBC I 1380. — 2 ♂, 14.3-15.8; 3 ♀, (2 ovigerous, 12.5-14.6) 15.6; 4 December 1965; dredge; FSBC I 1383. — 1 ♂, 8.3; 2 ♀, (1 ovigerous, 13.6) 15.3; 4 January 1966; trawl; FSBC I 1599. — 4 ♀, (2 ovigerous, 14.6, crushed) 13.3-16.5; 4 January 1966; dredge; FSBC I 1612. — 1 ♂, crushed; 1 juv., 4.3; 8 February 1966; trawl; FSBC I 1962. — 1 ♂, 4.9; 8 February 1966; dredge; FSBC I 15029. — 1 juv., molt; 4 March 1966; trawl; FSBC I 15031. — 1 ♀, 6.2; 7 April 1966; trawl; FSBC I 15032. — 1 ♂, 6.6; 1 juv., 3.4; 3 July 1966; dredge; FSBC I 15033. — 1 ♂, 4.9; 6 juvs., 2.4-5.0; 2 August 1966; trawl; FSBC I 15034. — 1 ♂, 8.0; 7 ♀, (1 ovigerous, 15.9) 8.4-16.4; 15 juvs., 2.5-4.5; 9 October 1966; dredge; USNM 156490. — 2 ♀, 11.3-14.1; 9 October 1966; trawl; FSBC I 15035. — 1 ♂, 13.1; 7 ♀, (3 ovigerous, 15.1-15.9) 16.0-16.6; 9 November 1966; trawl; SIFP 89:2536. — 4 ♂, 4.6-7.3; 2 ♀, 5.5-5.9; 65 juvs., 2.4-3.4; 2 December 1966; dredge; SIFP 89:2546. — 2 ♂, 5.9-9.6; 2 December 1966; trawl; FSBC I 15036. — 1 ♂, 6.9; 1 ♀, 9.5; 6 February 1967; trawl; FSBC I 15037. — 2 ♀, 13.4-14.6; 1 juv., 7.6; 6 February 1967; dredge; FSBC I 15038. — 3 ♂, 13.4-16.8; 3 ♀, (2 ovigerous, 12.8-14.8) 15.6; 9 juvs., 3.1-5.4; 3 March 1967; dredge; SIFP 89:2534. — 1 ♀, 15.6; 1 juv., 4.7; 3 March 1967; trawl; FSBC I 15039. — 1 ♂, 7.0; 4 April 1967; trawl; USNM 156491. — 1 cheliped; 12 May 1967; trawl; FSBC I 15040. — 22 juvs., 2.8-5.6; 12 May 1967; dredge; USNM 156493. — 2 ♂, 11.0-13.8; 3 June 1967; dredge; FSBC I 15041. — 2 ♂, 14.1, crushed; 2 July 1967; dredge; USNM 156495. — 2 ♂, 14.6-14.9; 1 ♀, 15.9; 2 August 1967; trawl; SIFP 89:2540. — 3 ♂, 11.0-15.0; 1 ♀, 6.0; 2 juvs., 4.6-6.2; 2 August 1967; FSBC I 15042. — 2 ♂, 8.8-16.0; 1 ♀, 12.6; 1 September 1967; trawl; FSBC I 15043. — 4 ♂, 5.5-12.3; 2 ♀, 6.4-13.1; 6 October 1967; trawl; FSBC I 15044. — 6 ♂, 8.1-13.1; 2 ♀, 5.8-14.0; 2 juvs., 2.5, crushed; 6 October 1967; dredge; FSBC I 15045. — 1 ♂, 14.8; 1 ♀, 11.7; 3 November 1967; dredge; USNM 156501. — 4 ♂, 10.1-15.1; 2 ♀, 8.9-15.0; 3 November 1967; trawl; UZMC 15.I.1977. — 1 ♂, 12.1; 2 ♀, 14.3-14.4, both ovigerous; 3 November 1967; trawl; FSBC I 6459. — HOURGLASS STATION K: 1 ♂, 12.8; 1 ♀, 15.3, ovigerous; 6 December 1966; dredge; SIFP 89:2544. — 1 ♀, 13.1, ovigerous; 15 May 1967; dredge; USNM 156492. — HOURGLASS STATION L: 1 ♂, 6.9; 13 June 1966; dredge; FSBC I 15046. — 2 ♂, 5.3-7.1; 6 July 1966; dredge; FSBC I 15047. — 2 juvs., 2.7-3.7; 6 August 1966; dredge; FSBC I 15048. — 1 ♀, 9.6; 5 September 1966; dredge; FSBC I 4286. — 1 ♂, 5.8; 8 April 1967; dredge; FSBC I 15049. — 2 ♀, 8.3, crushed; 16 May 1967; trawl; SIFP 89:2545. — 3 ♀, 4.6-7.5; 16 May 1967; dredge; FSBC I 15050. — 2 ♂, 4.6-7.3; 7 June 1967; dredge; FSBC I 15051. — 1 ♀, 7.3; 6 July 1967; dredge; FSBC I 15052. — 2 ♂, 6.1-6.5; 6 ♀, 6.0-8.3; 8 August 1967; trawl; USNM 156497. — 1 ♂, 8.3; 1 ♀, 7.6; 8 August 1967; dredge; SIFP 89:2535. — 2 ♀, both 7.9; 5 September 1967; dredge; USNM 156498. — 2 juvs., 3.2-3.3; 12 October 1967; dredge; FSBC I 15053. — 1 ♂, 7.4; 3 ♀, (2 ovigerous, 8.8-10.0) 4.4; 12 October 1967; USNM 156500. — 2 juvs., 2.6-3.1; 15 November 1967; trawl; FSBC I 15054. — 1 ♀, 7.0; 8 juvs., 2.1-4.4; 15 November 1967; dredge; SIFP 89:2533. — HOURGLASS STATION M: 1 ♀,

9.5; 13 October 1965; dredge; USNM 156486. — 1 ♂, 7.5; 1 ♀, 7.6; 12 April 1966; dredge; USNM 156487. — 1 juv., 4.3; 13 June 1966; dredge; FSBC I 15055. — 1 ♀, 5.8; 13 June 1966; trawl; FSBC I 15056. — 1 ♂, molt; 1 ♀, 7.0; 1 juv., crushed; 5 July 1966; dredge; FSBC I 15057. — 1 ♀, 4.7; 6 August 1966; dredge; FSBC I 15058. — 6 ♂, 2.3-7.6; 7 ♀, (1 ovigerous, 10.8) 5.4-10.8; 5 September 1966; dredge; FSBC I 4515. — 1 ♂, 8.0; 1 ♀, 3.5; 13 November 1966; dredge; FSBC I 15059. — 2 ♂, 8.0-15.6; 1 ♀, crushed, ovigerous; 13 January 1967; dredge; SIFP 89:2539. — 1 ♀, 12.8; 13 January 1967; trawl; SIFP 89: 2541. — 1 ♂, 14.4; 9 March 1967; trawl; SIFP 89:2542. — 2 ♂, 3.7, molt; 1 ♀, 4.4; 2 juvs., crushed; 9 March 1967; dredge; FSBC I 15060. — 1 ♂, 7.0; 1 ♀, 5.6; 8 April 1967; trawl; FSBC I 15061. — 1 ♂, molt; 16 May 1967; trawl; FSBC I 15062. — 2 ♂, 5.0-6.3; 7 June 1967; dredge; USNM 156494. — 2 ♂, 7.3-8.6; 1 ♀, 5.8; 6 July 1967; dredge; FSBC I 15063. — 1 ♂, crushed; 6 July 1967; trawl; FSBC I 15064. — 1 ♀, 6.0; 8 August 1967; dredge; FSBC I 15065. — 1 ♀, 13.4; 1 juv., crushed; 12 October 1967; dredge; FSBC I 15066. — EAST FLORIDA: RSP STATION 003: 1 ♀, 9.8; SIFP 89:1978; 1 ♂, 14.3; SIFP 89:1977; 15 August 1973; trawl. — 1 ♀, 10.0; 21 August 1973; trawl; RNHL D 31402. — 1 ♂, 12.4; SIFP 89:1973; 1 ♂, 15.0; MHNG; 10 October 1973; trawl. — 1 ♂, 10.1; MHNG; 1 ♀, 10.4; MNHNP acc. no. 7679; 2 ♂, 9.5-11.5; UZMC 15.I.1977; 18 July 1974; trawl. — 1 ♂, 8.7; 3 ♀, 11.2-13.1; SIFP 89:1410; 1 ♂, 10.8; 1 ♀, 14.0; SIFP 89:1411; 4 August 1974; trawl. — RSP STATION 004: 2 ♂, 11.0-12.1; SIFP 89:2092; 1 ♂, 10.8; FSBC I 10921; 13 August 1973; trawl. — 1 ♂, 10.0; FSBC I 10924; 1 ♀, 11.5, ovigerous; SIFP 89:1976; 1 ♂, damaged; SIFP 89:1981; 11 September 1973; trawl. — 1 ♂, 8.9; 15 May 1974; trawl; SIFP 89:1445. — 4 ♂, 9.8-12.1; 6 ♀, (3 ovigerous, 11.5-15.0) 13.3-13.7; SIFP 89:1425; 1 ♀, 9.1; SIFP 89:1408; 1 ♂, damaged; SIFP 89:1980; 1 ♂, 12.2; 1 ♀, 9.4; SIFP 89:1433; 17 July 1974; trawl. — 1 ♂, 10.1; 1 ♀, 12.3, ovigerous; SIFP 89:1538; 1 ♀, 13.1; FSBC I 10927; 15 August 1974; trawl. — RSP STATION 005: 1 ♂, 14.6; 18 January 1973; trawl; FSBC I 9806. — 1 ♂, 13.9; 5 March 1973; trawl; FSBC I 9828. — 3 ♂, 13.0-16.3; 4 ♀, (2 ovigerous, 13.8-14.1) 13.1-13.7; FSBC I 9849; 1 ♂, 13.2; 1 ♀, 13.9; FSBC I 9864; 4 April 1973; trawl. — 1 ♀, 10.0; 1 July 1973; trawl; FSBC I 10920. — 1 ♂, 7.8; 1 ♀, 13.0; FSBC I 10922; 1 ♀, 7.6; FSBC I 10923; 14 August 1973; trawl. — 1 ♂, 14.2; 1 ♀, 15.0; 9 September 1973; trawl; RNHL D 31403. — 2 ♀, 13.0-14.1; 17 October 1973; trawl; SIFP 89:1982. — 1 ♀, 14.4; 3 November 1973; trawl; FSBC I 10926. — 1 ♀, 14.0; 2 December 1973; trawl; SIFP 89:1983. — 1 ♂, 7.1; SIFP 89:1432; 1 ♂, 11.9; 1 ♀, 14.0, ovigerous; SIFP 89:1422; 19 April 1974; trawl. — 1 ♂, damaged; 16 May 1974; trawl; SIFP 89:1435. — 2 ♂, 12.0-13.6; SIFP 89:1423; 1 ♀, 13.8, ovigerous; SIFP 89:1407; 3 June 1974; trawl. — 1 ♂, 13.3; SIFP 89:1421; 1 ♂, 14.1; MNHNP acc. no. 7680; 1 ♀, 10.1; SIFP 89:1409; 19 July 1974; trawl. — 1 ♂, 9.3; RNHL D 31405; 1 ♀, 14.8; MNHNP acc. no. 7681; 1 ♀, 15.1, ovigerous; UZMC 15.I.1977; 13 August 1974; trawl. — 2 ♂, 11.8-12.8; 5 December 1974; trawl; SIFP 89:1970. — RSP STATION 222: 3 ♂, 12.6-14.6; 2 ♀, 14.0-14.5, both ovigerous; 13 September 1973; trawl; FSBC I 10925. — RSP STATION 251: 1 ♂, 10.6; 26 June 1973; trawl; SIFP 89:1975. — R/V GOSNOLD STATION 229/416: 1 ♂, 7.3; 2 ♀, 4.9-5.0; 17 April 1974; trawl; SIFP 89:1163. — R/V GOSNOLD STATION 245/695: 1 ♂, 14.1; 1 ♀, 14.9; 28 August 1974; trawl; UZMC 15.I.1977. — R/V GOSNOLD STATION 246/710: 1 ♀, 16.0; 4 September 1974; dredge; SIFP 89:1444. — R/V GOSNOLD STATION 248/741: 1 ♂, 4.5; 1 ♀, 14.6; 18 September 1974; trawl; SIFP 89:1401. — R/V GOSNOLD STATION 249/748: 1 ♀, 13.8; 11 February 1975; dredge; SIFP 89:2327.

Discarded material: HOURGLASS STATION C: 1 ♀; 11 August 1966; dredge. — HOURGLASS STATION D: 1; 3 August 1965; trawl. — 1; 27 August 1965; trawl. — 1; 27 August 1965; dredge. — 1; 31 August 1965; trawl. — 2; 5 October 1965; trawl. — 1 ♀; 7 June 1966; trawl. — 1 ♂; 3 July 1966; dredge. — 3 ♂, 2 ♀; 11 July 1966; trawl. — 1 ♂; 11 August 1966; trawl. — 2 ♂, 1 ♀; 11 August 1966; dredge. — 1 ♀; 9 September 1966; trawl. — 1 ♂, 6 ♀ (2 ovigerous); 9 October 1966; trawl. — 2 ♂, 3 ♀ (2 ovigerous); 9 October 1966; dredge. — HOURGLASS STATION E: 1; 31 August 1965; dredge. — 4 ♂, 2 ♀, 2 undet.; 7 April 1966; trawl. — 1 ♂; 7 April 1966; dredge. — 1 ♂; 7 June 1966; trawl. — 8 ♂, 8 ♀; 7 June 1966; dredge. — 2 ♂, 3 ♀; 3 July 1966; trawl. — 7 ♂, 7 ♀; 2 August 1966; trawl. — 8 ♂, 15 ♀; 2 August 1966; dredge. — 2 ♀; 1

September 1966; trawl. — 1 ♂, 2 ♀; 1 September 1966; dredge. — 2 ♀; 9 October 1966; trawl. — 2 ♂, 6 ♀ (1 ovigerous); 9 October 1966; dredge. — HOURGLASS STATION J: 1 ♀; 11 April 1966; trawl. — 1 ♂; 5 July 1966; trawl. — HOURGLASS STATION K: 1 ♂; 4 September 1966; trawl. — 2 ♀; 4 September 1966; dredge. — HOURGLASS STATION L: 1 ♀; 6 August 1966; dredge. — HOURGLASS STATION M: 1 ♂; 12 April 1966; trawl. — 1 ♀; 13 June 1966; trawl. — 2 ♂, 3 ♀; 13 June 1966; dredge. — 1 ♂, 1 ♀; 6 July 1966; trawl. — 1 ♂; 6 July 1966; dredge. — 1 ♂, 3 ♀; 6 August 1966; dredge. — 1 ♀; 5 September 1966; trawl.

Diagnosis: Carapace ovate-pentagonal or subcircular, slightly wider (1:1.10) than long; ventral spine on each side opposite cheliped; latter very long, four times as long as carapace, or nearly so; second segment of abdomen conspicuously three-lobed. (Modified from Rathbun, 1925).

Description: Carapace ovate-pentagonal or subcircular, from 1.07 to 1.16 times broader than long, with rounded sides, not noticeably angular; moderate postorbital constriction, more pronounced in young; prominent dentate pterygostomian ridge from lower orbit to just above insertion of cheliped. Depressions

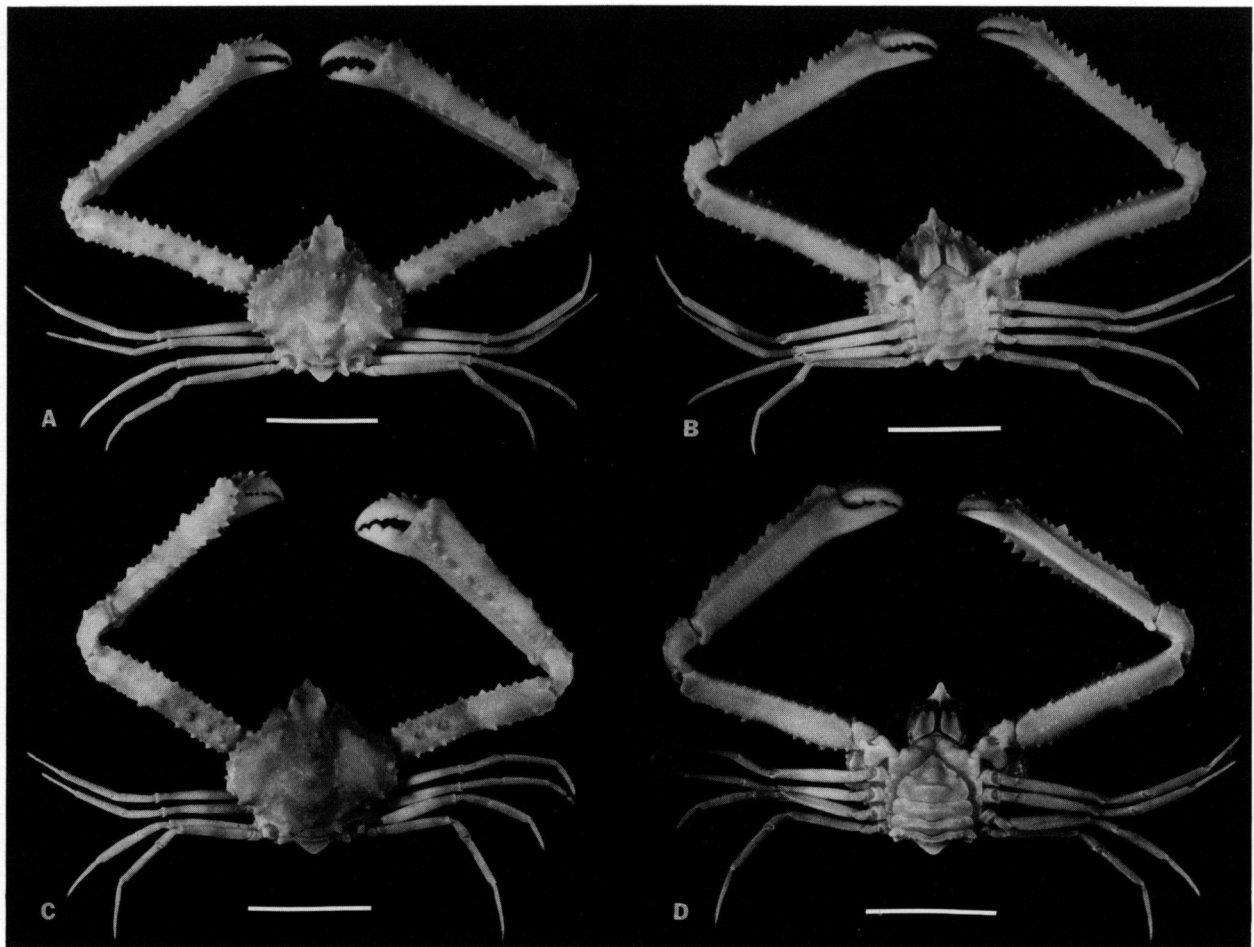


Figure 16. *Parthenope agona* (Stimpson). A. male, off Cape Canaveral, Florida east coast, dorsal view; B. same, ventral view; C. female, same locality, dorsal view; D. same, ventral view. Scale lines = 10 mm.

between regions dorsally and ventrally not remarkably deep but distinctly excavated. Surface coarsely punctate, or eroded in older specimens, covered with numerous rough granules or tubercles; larger tubercles more or less spiniform, often distinctly granulate at tips; smaller tubercles sometimes indistinct or obsolete; major tubercles arranged as follows: five on gastric region, four being smaller and near middle in transverse line, sometimes indistinct, fifth tubercle largest, on median line farther back; three large tubercles in longitudinal row on cardiac region; one on each urocardiac lobe; five on branchial region, outer and posteriormost larger, with latter often produced into blunt granular spine; one on each hepatic region. Anterolateral margin of branchial region armed with six small, irregular, often bifid teeth, fifth being smallest; broad, triangular tooth below and behind last of these; stout, incurved spine or tooth visible between ischia of cheliped and first walking leg lower on ventral surface. Rostrum declivate, slightly rounded with poor to well-developed median depression, produced into narrow, elongate, rounded tooth, often with denticles or irregular dentition laterally; acute, forward-pointing tooth over each antennular cavity; tooth often indistinct in older individuals. Several irregular spines on outer margin of orbit, small blunt spine on upper surface of eye distally.

Chelipeds extremely long, slender, arm length about 1.3 to 1.4 times width of carapace, upper surface finely rugose; irregular row of prominent or obsolescent dentiform tubercles near middle of upper surface of arm and wrist, nearer outer margin of hand; latter in some specimens either smooth or with one isolated or interrupted series of isolated tubercles; inner and outer margins of arm and wrist with similar tubercles; series of 18-20 irregular teeth on upper margin of hand, teeth increasing in size to point proximal to fingers, then abruptly diminishing; outer margin of hand with four to six larger teeth, sometimes with many intermediate or smaller teeth between. Walking legs long for genus, first pair reaching at least to distal margin of wrist; all legs slender, usually bare, nearly smooth, possessing minute spinules or only faint indications of same on upper margins of meral joints; older specimens with joints distinctly serrate to tuberculate. Conical spine or tubercle on either side of sternum near base of chelipeds, another on coxal joints of chelipeds.

Second abdominal somite with sharp, transverse crest forming prominent lobe in center, rounded to more or less flattened tooth on each side. Gonopods as illustrated (Figure 17 E-h).

Type-locality: Off the Marquesas, Carysfort and Conch Reefs, southeastern Florida; 40-49 fms (73-90 m); types not extant (*vide* Rathbun, 1925, p. 513).

Distribution: Off Cape Hatteras and Cape Lookout, North Carolina, to the eastern Gulf of Mexico from near Pensacola to Ft. Myers, Florida; off Cape Canaveral and the Indian River region of Florida, southward through the Florida Straits; north coast of Yucatan, Mexico; Puerto Rico, Barbados, Trinidad, Margarita Island (Venezuela), and offshore waters between Guyana and Surinam; 37-392 m. Hourglass Stations A (?), C, D, E, J (?), K, L and M; 6-18 m (?), 37-73 m.

East Pacific analogue: *Parthenope (Parthenope) hyponca* (Stimpson, 1871) (*vide* Garth, 1958).

Remarks: Most noticeable variation occurs in the general tuberculation of the carapace, especially along the anterolateral margins. In young specimens (Figure 18) the rostrum is less produced, but in older individuals becomes more so, increasing in length and width to a distinctly elongate rounded tooth or lobe. In other specimens it often is armed laterally with one or more spinules or flattened lobes; these lobes appear to follow closely on gonopod and gonopore development.

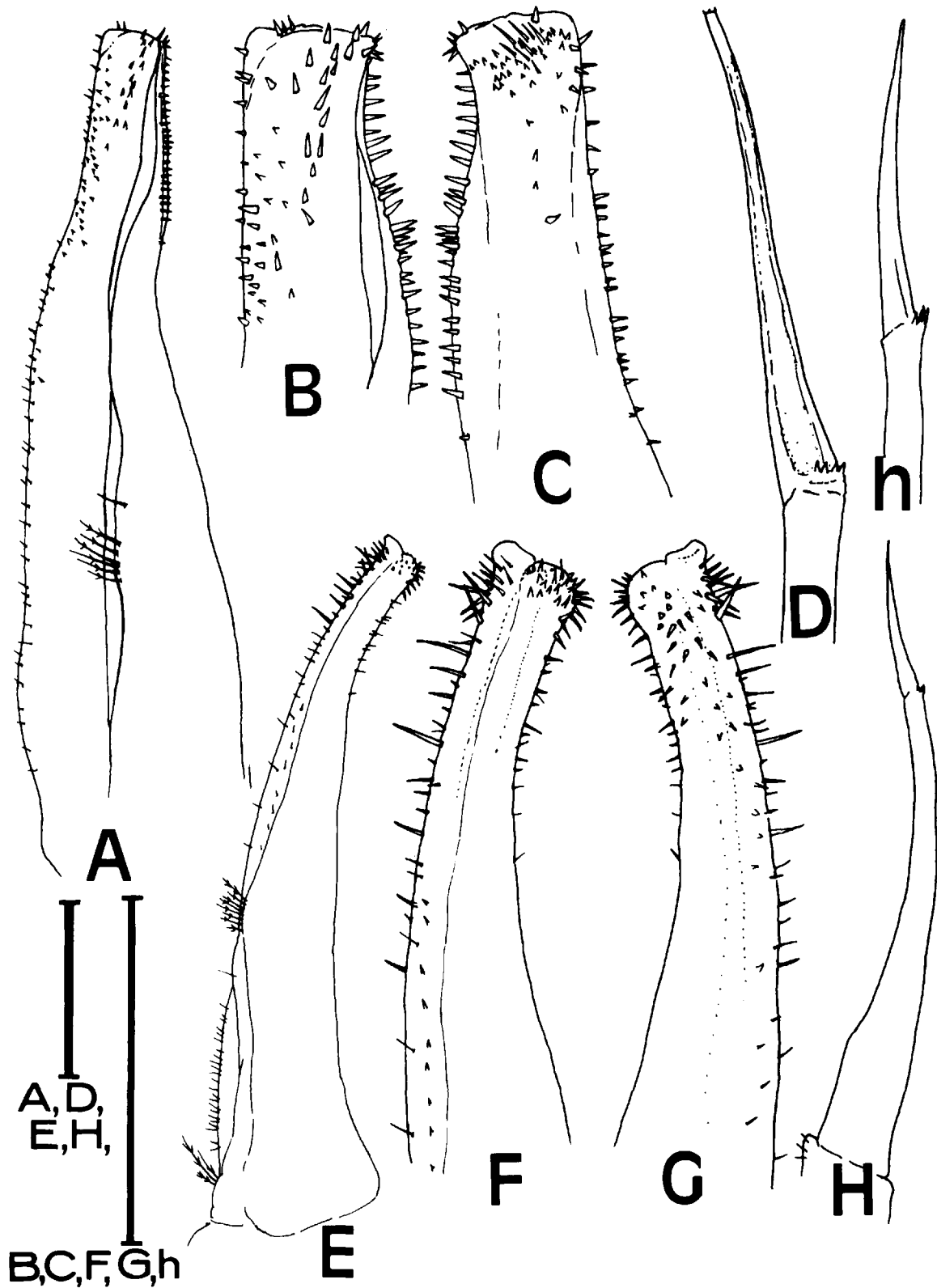


Figure 17. Major and minor left gonopods (pleopods 1 and 2) of male *Parthenope*, Atlantic specimens. *Parthenope pourtalesii* (Stimpson): A. UZMC 15.1.1977, major gonopod, medial view; B. same, detail of distal portion; C. same, ventral view, detail of distal portion; D. minor gonopod, mesiolateral view. *Parthenope agona* (Stimpson): E. MHNG, major gonopod, medial view; F. same, detail of distal portion; G. same, ventral view, detail of distal portion; H. minor gonopod, mesiolateral view; h. same, detail of distal portion. Scale lines = 1 mm.

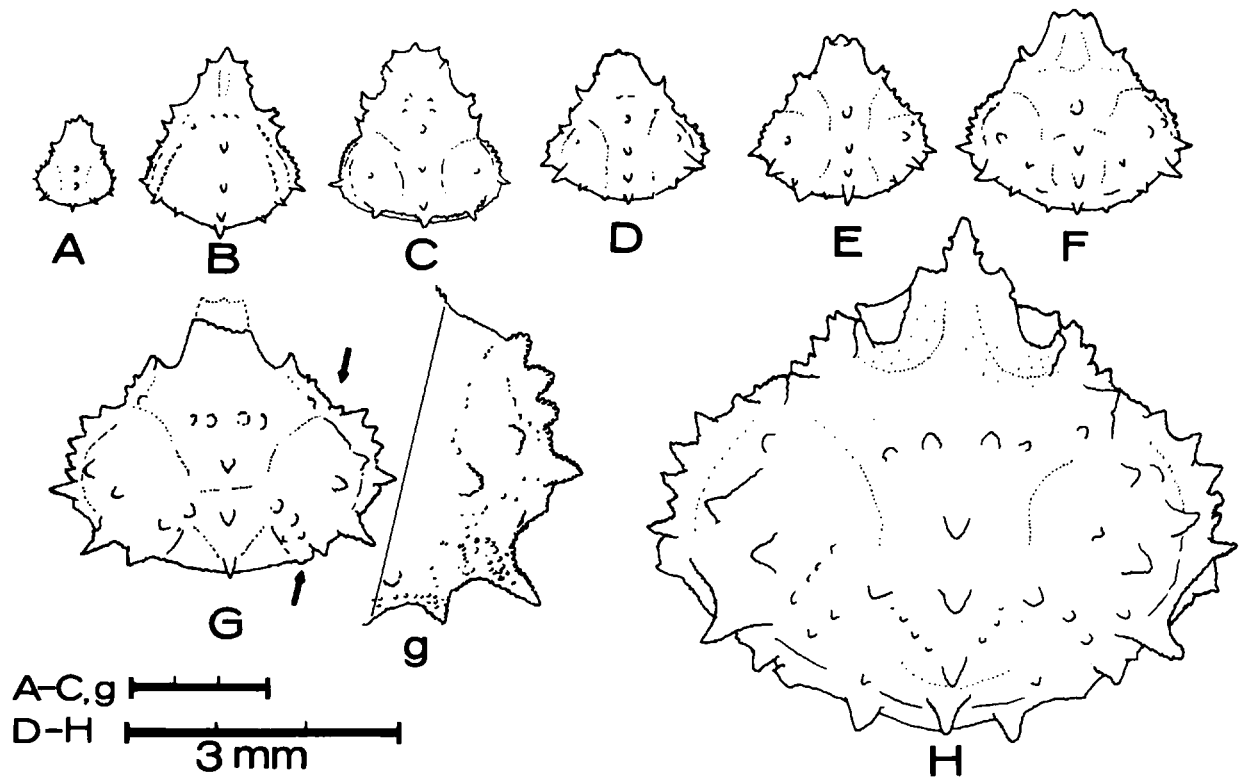


Figure 18. Development of carapace morphology in juvenile *Parthenope agona* (Stimpson), Gulf of Mexico specimens. A-F. SIFP 89:2546, unsexed juveniles; G. same lot, juvenile male, g. same, detail of right branchial region noted by arrows; H. SIFP 89:2532, juvenile male.

Discarded specimens of *P. agona* were considered in a separate analysis of depth distributions made by FDNR researchers. Rationale and discussion of these specimens is appended below.

Soto (1972, unpubl.) noted that *P. agona* was the most abundant parthenopid in his collections from the northeastern Gulf of Mexico continental shelf. This species was also the most numerous in both R/V *Hernan Cortez* and R/V *Gosnold* collections.

Parthenope fraterculus (Stimpson, 1871)

Figures 19-21

Lambrus fraterculus Stimpson, 1871a, p. 130; A. Milne Edwards, 1878, p. 150; Miers, 1886, p. 93 [listed]; Rathbun, 1898, p. 261 [listed]; 1900, p. 514 [key]; Holthuis, 1959, p. 192.

? *Parthenope horrida*: Young, 1900, p. 108 [not *Daldorfia horrida* (Linné) (= *Parthenope horrida*, auct.); see Remarks].

Parthenope (*Platylambrus*) *fraterculus*: Rathbun, 1921, p. 80; 1925, pp. 512 [key], 525, pls. 186, 187, pl. 190, fig. 2; Springer and Bullis, 1956, p. 22 [listed]; Bullis and Thompson, 1965, p. 13 [listed]; Williams, 1965, p. 269, text-figs. 249, 252D; L. Pequegnat, 1975, p. 48 [listed].

Platylambrus fraterculus: Flipse, 1930, p. 86 [listed].

Parthenope (*Platylambrus*) *fratercula*: Coelho and Araújo Ramos, 1972, p. 205 [listed].

Material examined: HOURGLASS STATION C: 1 ♂, 14.5; 11 July 1967; dredge; UZMC 15.I.1977. — HOURGLASS STATION D: 1 ♀, 5.8; 1 juv., crushed; 9 October 1966; dredge; SIFP 89:2829. — 4 ♂, 3.3-3.8; 9 November 1966; dredge; FSBC I 15149. — 1 ♂, 7.6; 1 ♀, 8.6; 6 February 1967; dredge; FSBC I 15150. — 1 ♀, 9.3; 4 April 1967; trawl; SIFP 89:2823. — 1 ♂, 5.1; 4 April 1967; dredge; SIFP 89:2821. — 4 juvs., 3.0-3.1; 12 May 1967; dredge; SIFP 89:2827. — 1 juv., 3.8; 21 May 1967; dredge; FSBC I 15151. — 1 ♂, 5.4; 5 juvs., 3.8-4.2; 2 July 1967; dredge; FSBC I 15152. — 1 ♀, 10.1, ovigerous; 2 August 1967; dredge; FSBC I 15153. — 1 ♀, 11.9; 12 September 1967; dredge; FSBC I 15154. — 2 juvs., 2.8-3.7; 6 October 1967; dredge; FSBC I 15155. — 1 ♂, 4.5; 1 ♀, 3.4; 2 juvs., 2.9-4.9; 6 October 1967; trawl; MNHNP acc. no. 7668. — 1 ♀, 6.5; 3 November 1967; trawl; FSBC I 15157. — 2 ♀, 10.6-12.1; 21 November 1967; dredge; FSBC I 15156. — HOURGLASS STATION E: 5 ♂, 10.8-15.8; 1 ♀, 10.0; 7 June 1966; dredge; FSBC I 3113. — 2 ♂, 4.3-11.8; 1 ♀, 5.9; 2 August 1966; dredge; FSBC I 3704. — 2 ♀, 4.7-5.0; 2 juvs., both 3.0; 3 March 1967; trawl; SIFP 89:2825. — 1 ♂, 13.9; 3 March 1967; trawl; FSBC I 15159. — 1 juv., 2.6; 12 May 1967; trawl; FSBC I 15160. — 1 ♂, 4.0; 2 juvs., both 2.8; 12 May 1967; dredge; FSBC I 15161. — 1 ♀, 5.3; 7 juvs., 3.1-3.8; 2 August 1967; dredge; UZMC 15.I.1977. — 1 ♀, 3.6; 6 October 1967; trawl; FSBC I 15162. — 1 ♀, 9.8; 3 November 1967; trawl; SIFP 89:2822. — HOURGLASS STATION L: 1 ♂, 6.9; 1 ♀, 6.9; 6 August 1966; dredge; FSBC I 3785. — 3 juvs., 2.9-3.6; 5 September 1966; dredge; FSBC I 4284. — 1 ♀, 7.0; 13 January 1967; trawl; FSBC I 15163. — 1 juv., 2.6; 16 February 1967; dredge; FSBC I 15164. — 1 ♂, 3.7; 1 juv., 3.7; 8 April 1967; dredge; FSBC I 15165. — 1 ♂, 5.0; 2 ♀, 4.8-5.0; 16 May 1967; dredge; FSBC I 15166. — 2 ♀, 6.1-11.3; 7 June 1967; dredge; FSBC I 15167. — 2 ♀, 4.0-5.0; 6 July 1967; dredge; FSBC I 15168. — 2 ♀, 7.3-9.4; 8 August 1967; trawl; FSBC I 15169. — 2 ♂, 7.0-7.6; 8 August 1967; dredge; MHNG. — 1 ♂, 5.3; 2 ♀, 6.6-8.9; 5 September 1967; dredge; FSBC I 15170. — 1 ♂, 8.8; 12 October 1967; trawl; FSBC I 15171. — 1 ♂, 6.0; 12 October 1967; dredge; FSBC I 15172. — 3 ♂, 3.9-7.4; 15 November 1967; dredge; SIFP 89:2820. — 4 juvs., 2.6-2.8; 15 November 1967; trawl; FSBC I 15173. — HOURGLASS STATION M: 2 ♀, 10.5-12.8; 13 October 1965; dredge; FSBC I 15174. — 2 ♂, 13.4-13.8; 13 November 1965; dredge; FSBC I 1198. — 1 ♀, crushed; 13 June 1966; dredge; FSBC I 15175. — 1 ♀, 9.1; 16 August 1966; trawl; FSBC I 3719. — 4 ♂, 5.5-7.3; 6 ♀, 5.2-6.4; 25 juvs., 2.6-2.8; 5 September 1966; dredge; FSBC I 4516. — 1 ♀, 7.3; 13 October 1966; trawl; FSBC I 15176. — 1 ♀, 7.4; 7 December 1966; dredge; FSBC I 15177. — 3 ♂, 11.9-16.4; 7 June 1967; dredge; SIFP 89:2828. — 7 juvs., all 3.0; 6 July 1967; dredge; FSBC I 15178. — 3 juvs., 4.8-6.1; 5 September 1967; dredge; FSBC I 15179. — EAST FLORIDA: RSP STATION 003: 1 ♀, 12.5; FSBC I 10929; 1 ♀, 12.4; SIFP 89:1994; 15 August 1973; trawl. — 1 ♀, 12.4; 10 September 1973; trawl; FSBC I 10931. — 1 ♀, 11.6; 10 April 1974; trawl; SIFP 89:1429. — 1 ♀, 12.4; FSBC I 10932; 1 ♀, 14.0; SIFP 89:1426; 4 June 1974; trawl. — 1 ♀, 11.0; SIFP 89:1419; 1 ♂, 12.1; FSBC I 10933; 18 July 1974; trawl. — 1 ♂, 10.8; 14 August 1974; trawl; SIFP 89:1512. — RSP STATION 004: 1 ♀, 11.6; 11 September 1973; trawl; SIFP 89:1989. — 1 ♀, 10.0; 5 June 1974; trawl; SIFP 89:1428. — 1 ♂, 9.0; SIFP 89:1434; 1 ♀, 13.8; MNHNP acc. no. 7683; 1 ♂, 9.8; RNHL D 31415; 19 July 1974; trawl. — 1 ♀, 11.0; SIFP 89:1429; 1 ♀, 11.9, ovigerous; MHNG; 15 August 1974; trawl. — 1 ♀, 11.4; 6 December 1974; trawl; SIFP 89:1971. — RSP STATION 005: 1 ♂, 13.8; FSBC I 10928; 1 ♂, 6.4; SIFP 89:2150; 6 February 1973; trawl. — 1 ♂, 13.9; 5 March 1973; trawl; FSBC I 9827. — 3 ♂, 9.2-14.7; 14 August 1973; trawl; SIFP 89:1988. — 1 ♂, 11.9; 9 September 1973; trawl; FSBC I 10930. — 1 ♀, 12.5; 17 January 1974; trawl; SIFP 89:1995. — 1 ♂, 8.3; 1 ♀, 11.4; RNHL D 31414; 1 ♀, 15.0, ovigerous; SIFP 89:1436; 16 May 1974; trawl. — 1 ♂, 8.4; 1 ♀, 9.6; 3 June 1974; trawl; UZMC 15.I.1977. — RSP STATION 076: 1 ♂, 13.1; 23 May 1974; trawl; SIFP 89:1998. — RSP STATION 222: 1 ♀, 15.6; 13 September 1973; trawl; SIFP 89:1990. — R/V GOSNOLD STATION 237/502: 1 ♀, 10.0; 10 June 1974; trawl; SIFP 89:1287. — R/V GOSNOLD STATION 237/514; 3 ♀, (2 ovigerous, 13.1-13.2) 17.7; 12 June 1974; trawl; BMNH no number. — R/V GOSNOLD STATION 237/515: 1 ♂, 9.5; 12 June 1974; trawl; RNHL D 31416. — R/V GOSNOLD STATION 242/601: 1 ♂, 11.6; 1 ♀, 10.1; 14

August 1974; dredge; SIFP 89:1405. — R/V GOSNOLD STATION 246/696: 1 ♀, 12.5; 3 September 1974; dredge; SIFP 89:1447. — R/V GOSNOLD STATION 246/698: 1 ♂, 13.5; 1 ♀, 11.5; 3 September 1974; dredge; SIFP 89:1442. — R/V GOSNOLD STATION 246/702: 2 ♂, 7.9-12.6; 3 September 1974; dredge; SIFP 89:1443. — R/V GOSNOLD 246/709: 1 ♂, 9.0; 4 September 1974; dredge; SIFP 89:1441. — R/V GOSNOLD STATION 248/735: 2 ♂, 11.4-11.7; 18 September 1974; dredge; SIFP 89:1449. — R/V GOSNOLD STATION 248/737: 2 ♂, 14.8-16.4; 18 September 1974; dredge; MHNG. — R/V GOSNOLD STATION 248/738: 1 ♀, 6.8; 18 September 1974; dredge; SIFP 89:1403. — R/V GOSNOLD STATION 248/740: 1 ♀, 12.8, ovigerous; 18 September 1974; trawl; SIFP 89:1400. — R/V GOSNOLD STATION 250/758: 1 ♀, 11.9; 18 February 1975; dredge; SIFP 89:2481. — R/V GOSNOLD STATION 250/759: 1 ♂, 9.0; 18 February 1975; dredge; MNHNP acc. no. 7682. — R/V GOSNOLD STATION 262/772: 1 ♂, 5.6; 12 August 1975; dredge; SIFP 89:2441. — R/V GOSNOLD STATION 262/783: 1 ♂, 14.1; 2 ♀, (1 ovigerous, 14.1) 13.0; 13 August 1975; dredge; UZMC 15.I.1977. — R/V GOSNOLD STATION 262/785: 1 ♂, 14.0; 2 ♀, (1 ovigerous, 13.8) 9.0; 13 August 1975; dredge; UZMC 15.I.1977. — R/V GOSNOLD STATION 267/793: 4 ♀, (2 ovigerous, 11.6-12.4) 10.6-12.5; 2 December 1975; dredge; SIFP 89:2758. — R/V GOSNOLD STATION 267/796: 1 ♂, 16.1; 1 ♀, 10.0; 2 December 1975; dredge; SIFP 89:2818.

Diagnosis: Carapace subtriangular to ovately pentagonal, about 1.06 times wider than long. Branchial regions inflated, usually separated from gastric-cardiac ridge by deep depression, abruptly delimited marginally, falling steeply away along anterolateral margin. Rostrum either rounded, triangular, or ending in long, narrow tooth. Slender spine outside of and below lateral tooth of front. Supraorbital ridge in males usually with distinct tubercle carrying tuft of setae apically; tuft wanting in some males. Meral joints of ambulatory legs with denticulate margins; dactyli setose, that of fourth walking leg at least 1.4 times longer than propodus.

Description: Carapace subtriangular to ovately pentagonal, four- to five-sided; posterolateral margins continuous with two sides of posterior margin; long, anterolateral margins in line with rostral borders. Depressions separating branchial from cardiac and hepatic regions usually deep. Narrow ridge connecting cardiac and gastric regions; wider ridge connecting branchial and hepatic regions; deep hollow below ridge visible in side view. Carapace ornamentation extremely variable, with few to many large tubercles and spines placed generally as follows: three gastric in triangle, posterior largest; one genital; two cardiac, anterior larger; three on branchial ridge, posterior longest; all variable in number, size and position. Front rounded, triangular or acute, usually inclined about 45° or less, often ending in narrow, blunt tooth; another blunt tooth on each side above antennules, with small, slender spine outside and below tooth. Tubercle on each preorbital lobe; second tubercle in males or well-developed prominence in females on supraorbital ridge; tubercles in males often carrying distinct tuft of setae. Large, submarginal tubercle on subhepatic region visible in dorsal view. Margin of branchial region in front of ridge variably armed, with 5-10 small teeth progressing posteriorly, second or third from last tooth being elongate; two or three small teeth behind ridge. Posterior margin with three distinct, equal teeth, often with larger tubercles interspersed. Small, blunt tooth at inner, lower angle of orbit; large tubercle between this tooth and angle of buccal cavity. Row of five or more tubercles near outer margin of endognath.

Chelipeds of male about 2.5 times as long as carapace, rather slender, especially merus; inner, upper, and outer margins of merus armed with few, very unequal, stout spines; carpus with one, occasionally two, large, tubercle-like spines on outer surface; outer and inner margins of manus armed with triangular, denticulate, very unequal teeth, usually six or seven larger ones on inner margin, three or four on outer margin; latter sometimes subequal in size; large, conical tubercle at proximal third. Upper surfaces of meri of walking legs denticulate; dactyli setose except at tip; carpus and propodus of last pair with two or three lobes



Figure 19. *Parthenope fraterculus* (Stimpson). A. male, spiny form, off St. Lucie Inlet, Florida east coast, dorsal view; B. same, ventral view; C. male, blunt form, off Ft. Pierce Inlet, Florida east coast, dorsal view; D. same, ventral view. Scale lines = 5 mm.

above, five denticles below; dactyl at least 1.4 (up to 1.6) times longer than propodus.

Sternum and abdominal somites variably tuberculate; large, transverse tubercle on each of abdominal somites 2-6. Gonopods as illustrated (Figure 21).

Type-locality: Off Sand Key, Carysfort and Conch Reefs, and west of Dry Tortugas, southern Florida; 26-68 fms (48-124 m); types not extant (*vide* Rathbun, 1925, p. 525).

Distribution: Off Cape Fear, North Carolina; peninsular Florida from the central east coast to Dry Tortugas,