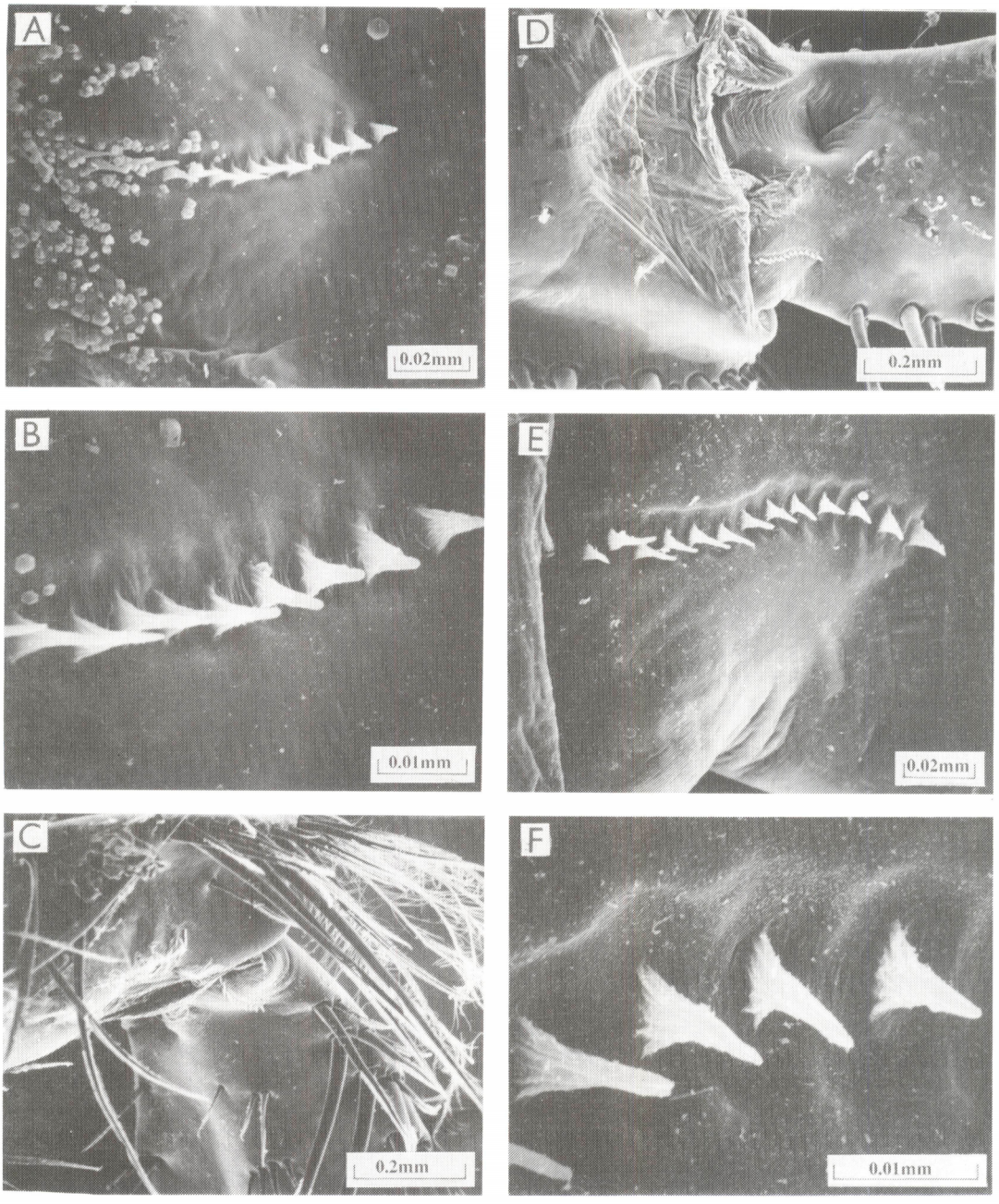

Fig. 6. A, *Leander plumosus* sp. nov., male, paratype. **A**, proximal end of carpal segment of third maxilliped endopod; **B**, *Leander plumosus* sp; nov., male, paratype, same, higher magnification; **C**, *Leander tenuicornis* (Say), sex?, Puerto Rico, joint between carpus and antepenultinate segment of endopod of third maxilliped; **D**, *Leander tenuicornis* (Say) ovigerous, female, Groote Eylandt, Gulf of Carpentaria (NTM Cr.005100), ventral carpo-ischiomeral joint of third maxilliped endopod; **E**, *Leander tenuicornis* (Say), same, higher magnification; **F**, *Leander tenuicornis* (Say), same, higher magnification.

These setae are particularly well developed in *L. plumosus* (described above), and almost completely obscure the ventral rostral teeth. These submarginal rows are usually of decreasing length distally on the rostral lamina, but in *L. plumosus* they increase in length distally, except at the very extreme tip, and diverge strongly laterally. The setae are particularly densely pigmented and have a shaft diameter of about 0.08 mm and length of 1.5 mm, with setules

throughout the length, uniformly about 47 to the 0.01 mm length, length about 0.175 mm. The homologous setae of *L. tenuicornis* (ovigerous female, carapace length 6.3 mm) have a shaft diameter of about 0.06 mm, length of 0.9 mm, with about 30 setules to the 0.01 mm length, length 0.9 mm. The dorsal rostral lamina also bears numerous similar isolated short plumose setae, that have not been reported in the other species of the genus. Similar plumose body setae do not appear to have been reported in *L. tenuicornis* and *L. paulensis* (Ortmann) (Holthuis, 1950, 1952; Manning 1961; Ramos-Porto 1986), but are known to occur in *L. kempi*. They do not appear to have been reported in other palaemonid shrimps but occur more commonly in the Hippolytidae (e.g. *Hippolyte ventricosa* H.M. Edwards), where their presence and absence has caused some taxonomic confusion. Similar problems could also occur in *Leander*, as it can be seen that the specimen photographed in Bali is markedly more densely plumose than the Maldive specimens. In the Maldive specimens, the male is also distinctly less strongly plumose than the female and many of the plumose setae have lost their setules, presumably through age and abrasion, so that they appear as rigid setae. Possibly some specimens will be found that lack these characteristic setae, but these will be readily identifiable on the basis of other morphological characters.

The ambulatory pereopods are provided dorsally with small spines rather than setae, with the central part of the ventral surface minutely serrate, and presenting a rather characteristic appearance. Similar spines also occur in the same position in *L. tenuicornis* (Bruce 1991). The minute spinulate sensory mechanism on the penultimate segment of the third maxilliped endopod, is also present in *L. kempi* (Fransen, pers. comm.) and also in *L. tenuicornis* (Fig. 6 C-F). Similar sensillae at the distal side of the carpo-propodal joint of the second maxilliped of *Panulirus argus* Latreille are illustrated by Laverack and Barrientos (1985: fig. 4B), who note that these are mechano-receptors and occur in various macruran decapods. They present a slightly different appearance when viewed by optical microscopy, appearing to have a series of short radially arranged ridges behind the spines, which are possibly internal chitinous thickenings, as they are not visible on the external surface under SEM examination.

It may also be noted that *L. plumosus* has the fourth thoracic sternite provided with a distinct median process. A similar process is present in *L. tenuicornis* and this feature is probably a character of the genus *Leander*.

A revision and resurrection of the the genus *Urocaridella* Borradaile is in progress (Chace and Bruce, in press), and it is likely that the genus *Leander* Desmarest will contain only four species, one near circumtropical (*L. tenuicornis*), two Indo-West Pacific species (*L. kempi, L. plumosus*) and one western Atlantic species (*L. paulensis*). These species may be distinguished by the following key:

A key to the species of *Leander* Desmarest, 1849 (sensu Chace and Bruce, 1993)

1 a. Carpus of second pereopod distinctly shorter than chela; rostrum less length than 1.5 times carapace 2
  b. Carpus of second pereopod distinctly longer than chela; rostrum and scaphocerite elongate, greatly exceeding carapace length (2.5 times, male; 1.75 times, female), R. 2+9-10/9-12..... *L. plumosus* sp. nov.
2 a. Anterior margin of proximal segment of antennular peduncle convex, with acute tooth laterally, reaching to about middle of intermediate peduncular segment; second pereopod with palm of chela not swollen; fingers not longer than palm; fourth pleura posterioventrally rounded. 3
  b. Anterior margin of proximal segment of antennular peduncle concave, with acute tooth laterally, exceeding dorsal anterior margin of intermediate segment; chela of second pereopod with palm swollen, fingers longer than palm; fourth and fifth abdominal pleura acute posteroventrally; R. 2+6-12/5-7 .....*L. tenuicornis* (Say)
3 a. Fifth abdominal pleuron posteroventrally rounded; R. 2+10-12/5-7 ....*L. kempi* Holthuis
  b. Fifth abdominal pleuron posteroventrally acute; R. 3+8-11/5-7 ....*L. paulensis* (Ortmann)

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