ends, 3–4 transverse septa and 1–2 longitudinal or oblique septa, 10–18×7–12 μm.

Stromata immersa, erumpentia, atra; pycnidia globosa, brunnea, magnit. 100–130 μm in diam. Conidia pallide brunnea vel brunnea ovalea vel cylindricea rotundata, 3–4 transversaliter septato 1–2 longitudinaler vel obliquo septato, magnit. 10–18×7–12 μm.

Hab on spines of *Acacia sphaerocephala* Loc Bombay, dated 15 January 1985, Leg S.S.K. AMH No. 6783 (Holotype); 6784. The genus *Camarographium* is a new generic record to the country. On the basis of comparative studies and literature review[1–5] the present collection is identified as a new species.

2. *Monodictys castaneae* (Wallr) Hughes

Colonies black, spreading. Conidiophore cell not swollen; conidia ellipsoidal to spherical or oblong, reddish brown to brown, verrucose, multicellular, slightly constricted at septa, verrucose; 14–25×10–15 μm. AMH nos. 6778 and 6779.

3. *Phoma acaciae* Penz and Sacc

Conidiomata globose, innate, ostiole inconspicuous, 160–250 μm. Conidia hyaline, cylindrical with rounded ends, 4–7×2–3 μm. AMH 6330 and 6780. This is a new report to India.

4. *Pleospora herbarum* (Fr) Rabenh

Ascocarps globose, somewhat flattened vertically, immersed erumpent, papillate ostiolate, 200–250×100–120 μm. Asci many, cylindrical, bitunicate 85–105×15–22 μm. Ascospores light brown, to brown, oval to cylindrical with rounded ends with 3 to 4 transverse and 1–2 vertical or oblique septa; 14–18×5–7 μm. AMH nos. 6330; 6781 and 6782.

All the four fungi are reported on this host for the first time. The exsiccatti of the above four fungi are deposited in AMH at M.A.C.S. Research Institute, Pune.

25 October 1985

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SPERMATHECAL HISTOLOGY OF VIRGIN AND MATED FEMALES OF THE MANTID, *HIERODULA COARCTATA*, WEST (DICTYOPTERA: MANTIDAE)

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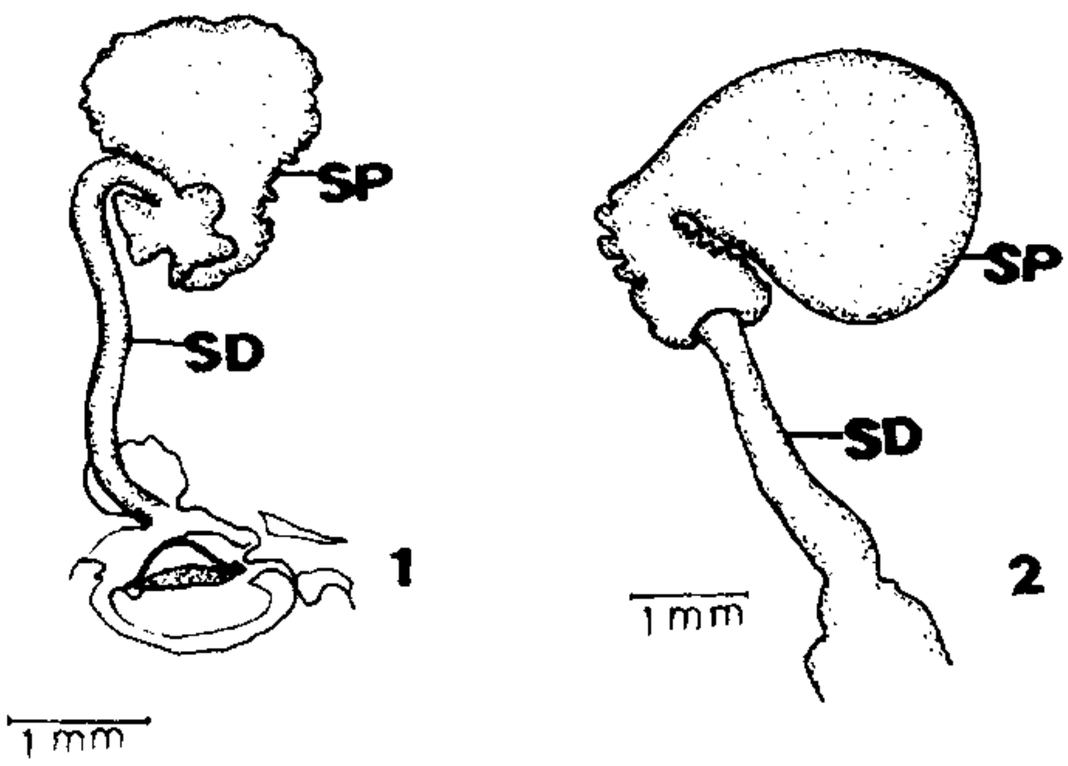
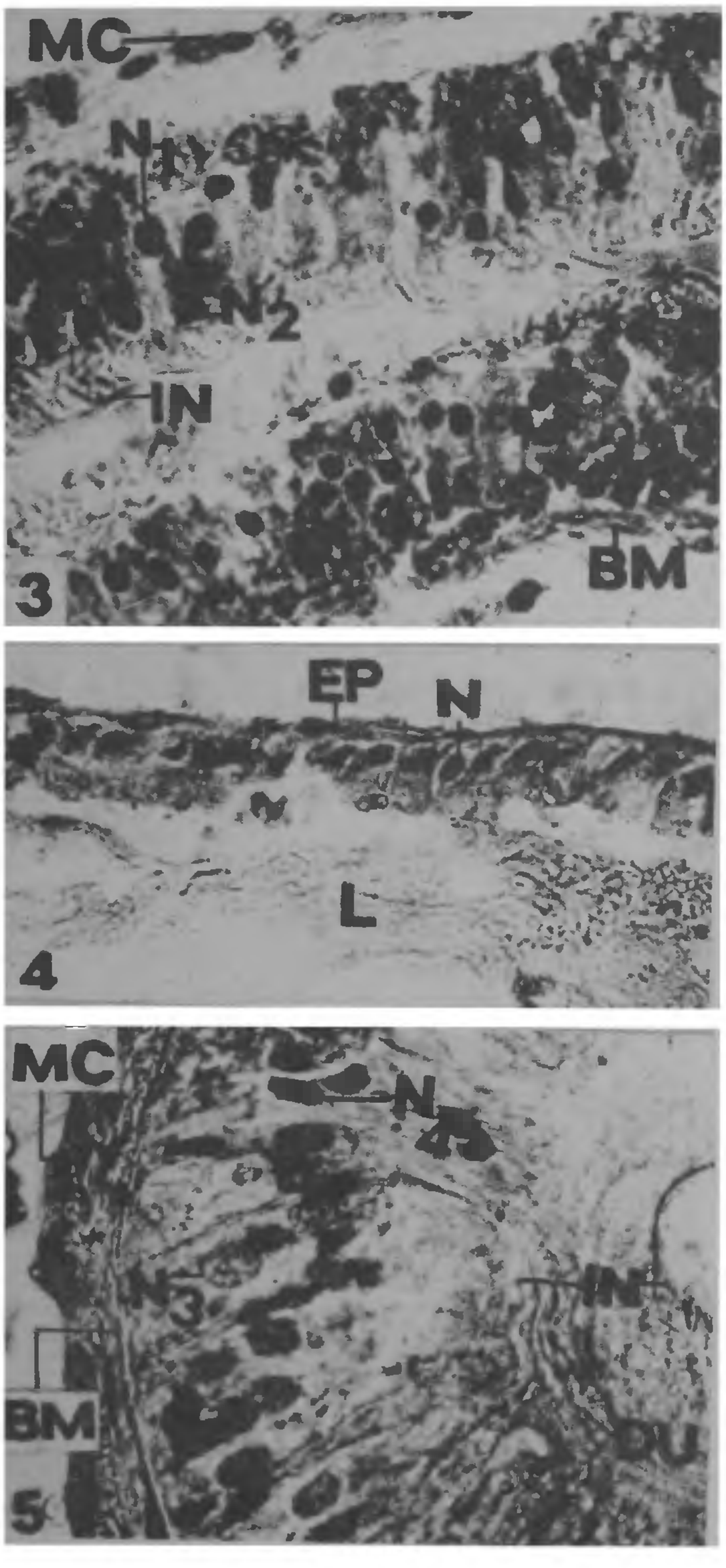
THE histology of spermatheca of only mated females has been described earlier in dictyopteran insects[1–10]. The present study reports striking differences between spermathecal histology of virgin and mated females of *Hierodula coarctata.*

The spermatheca of *H. coarctata* is without spermathecal accessory gland. It is a pyriform transluscent sac-like organ in virgin female (figure 1) while in mated female it becomes globular and turgid (figure 2). The spermatheca opens between the bases of the inner valves of the ovipositors through spermathecal duct.



Figures 1 and 2. Camera lucida drawing of the spermatheca of: **1.** virgin female. **2.** mated female.



Figures 3, 4 and 5. T. S. of the spermatheca of: **3.** virgin female showing double-layered epithelium. (×1,500). **4.** Mated female showing single-layered epithelium. (×1,400) **5.** Duct showing two types of cells arranged in a single layer, (×1,330). BM basement membrane; DU, ductule; EP, epithelium; IN, chitinous intima; L, lumen of the spermatheca; MC, muscle coat; N, nucleus; N_1, nucleus of the outer layer cell; N_2, nucleus of the inner layer cell; N_3, nucleus of the broad columnar cell; N_4, nucleus of the slender cell; SD, spermathecal duct; SP, spermatheca.

The spermathecal epithelium of virgin female (figure 3) consists of two distinct layers of cells: (i) an outer layer of columnar cells with basally situated, oval, granulated nuclei and (ii) an inner layer of cuboidal cells having apically situated, round, darkly stained nuclei. It is surrounded by a thin muscle layer and lined by a chitinous intima.

In mated females the spermathecal epithelium (figure 4) consists of a single layer of cuboidal cells having basally situated oval nuclei. It is supported by a basement membrane and surrounded by a thin muscle coat. Chitinous intima is absent and the lumen is filled with secretion as well as sperms.

The structure of spermathecal duct of virgin and mated females is identical. The epithelium (figure 5) consists of two types of cells arranged in a single layer: (i) broad columnar cells with basally situated, oval, granulated nuclei and (ii) slender cells having medially situated, elongated, darkly stained nuclei. The broad columnar cells possess thin ductules which traverse through thick intima and open into the lumen. The epithelium is supported by a basement membrane and is surrounded by thick muscular coat.

Two following observations were noted for the first time: (i) the spermathecal epithelium is doubled-layered in virgin female and single-layered in mated female. This is probably due to delamination of the inner cell layer along with chitinous intima. (ii) The epithelium of the spermathecal duct consists of two types of cells arranged in single layer. In virgin female both spermatheca and its duct have glandular epithelium while only the spermathecal duct of mated female contains secretory cells.

18 December 1985; Revised 10 March 1986

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PRESENCE OF ELASTIN AND COLLAGEN IN THE INNER LINING OF THE FOREGUT IN THE ISOPOD *LIGIA EXOTICA* ROUX

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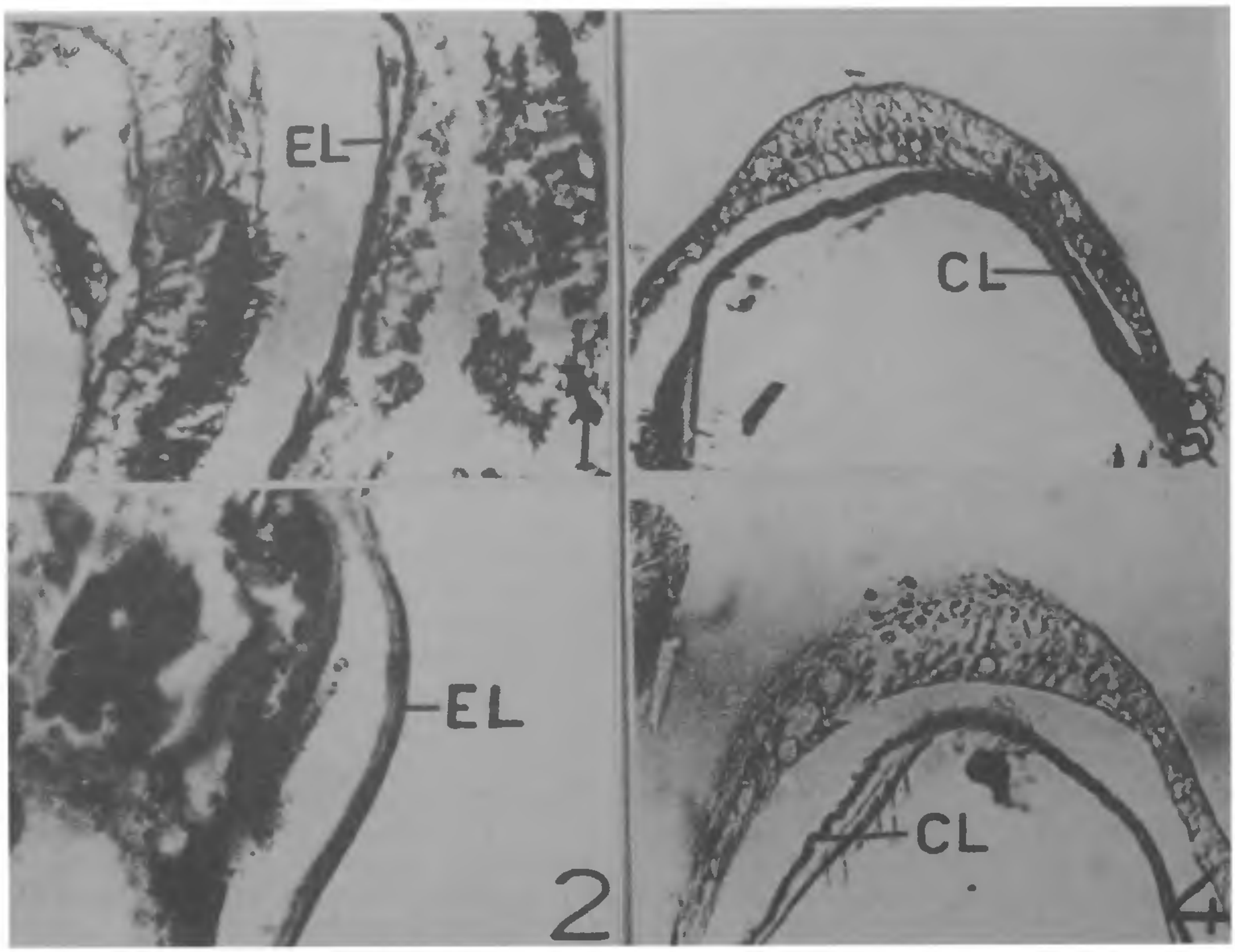
IN many animals the presence of a layer in the foregut helps to withstand against pressure and abrasion caused by the intake of food material. Generally the internal epithelial lining of the foregut and hindgut in Crustacea has been reported as chitin layer[1–3]. However, in some isopods the presence of chitinous intima has been demonstrated in the foregut and hindgut[4,5]. In the herbivorous isopod *Dynamene bidentata*, the intima enveloping over the surface of the hindgut epithelium appears to be composed of a thin acid fuchsin positive layer overlying a thicker aniline blue positive layer[6]. In the present study, on the foregut of the isopod *Ligia exotica*, the foregut wall consists of a thin inner elastin layer and a thick outer collagen layer.

In the foregut the inner layer appears to be composed of two distinct layers, an inner thin layer and an outer thick layer. These layers envelop the foregut epithelium which rests on basement membrane. The inner layer is found to be strongly positive to aldehyde fuchsin (figure 1). This layer is also positive to periodic acid/Schiff (PAS) reaction,



Figures 1–4. Transverse section of foregut showing **1, 2** inner elastin layer and **3, 4** outer collagen layer. **1.** Aldehyde fuchsin. **2.** Verhoeff's stain. **3.** Azan technique. **4.** Aniline blue. EL, elastin; CL, collagen.