treatment to *Metapenaeus monoceros*[5] resulted in the dispersion of yellow, red and black chromatophores, the red showing maximum dispersion and black minimum respectively. The maximum dispersion of black pigment after adrenalin treatment recorded by us is a new report in this field. Furthermore the degree of dispersion produced in the red pigment of *P. pelagicus* is lesser than that of black pigment. The reason behind this difference in the response to adrenalin administration remains to be understood.

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FURTHER STUDIES ON THE PROLACTIN SECRETING (LTH) CELLS IN THE HYPOPHYSIS OF BROWN SPINY MOUSE, *MUS PLATYTHRIX*, BENNETT

MADHYASTHA AND DUTT[1] have reported two types of prolactin cells, namely type I and type II, in the hypophysis of *M. platythrix*. They have further shown that the type I prolactin cells are estrone sensitive and reveal immense hyperplasia following the injection of estrone in low concentration. Type I LTH cells are also reported to increase in number in the pituitary transplanted in the kidney of the same species[2]. The present communication provides information regarding the origin of prolactin cells in *M. platythrix*.

Pregnant and lactating females of *M. platythrix* were collected from Kadkola, a village about 8 kms from Mysore city, S. India. They were kept in cages for a few days in the laboratory to get acclimatized to the laboratory conditions. Animals weighing 25–30 gms were used. They were maintained on jowar and ragi grains; water was given *ad libitum*. The pituitary were carefully removed and were fixed in Hollande-Bouin-sublimate and formol-sublimate fixatives. 4–5 μ paraffin sections were stained with[5] 0·01 % toluidine blue[3], Cleveland and Wolfe[4], Brookes and Herlant tetrachrome[6] methods.

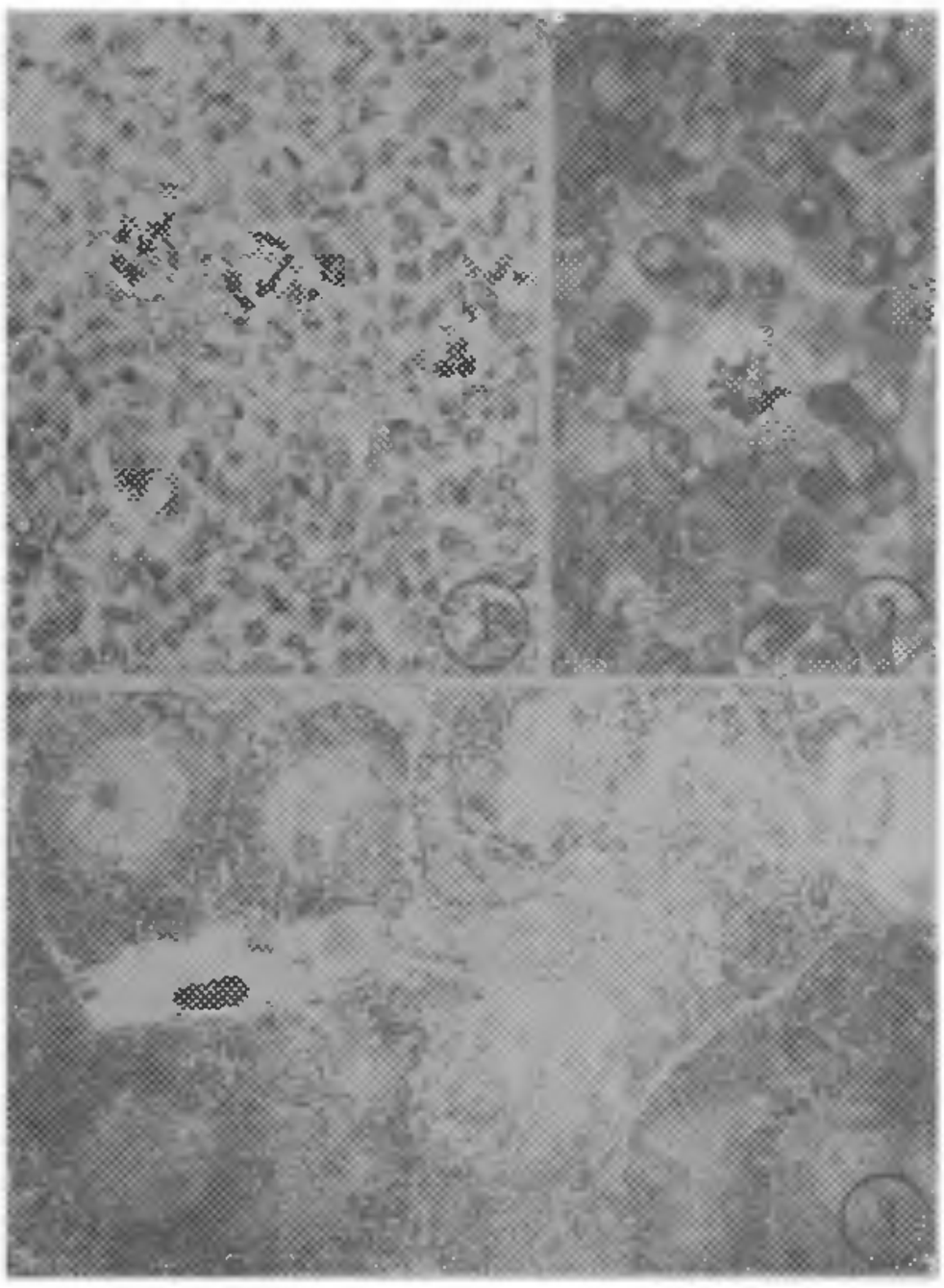
For electronmicroscopic studies, pituitaries of pregnant and lactating mice were fixed in ice-cold 2·5 % glutaraldehyde buffered at pH 7·4 with 0·1 M cacolydate for 2 h and embedded in epon 812 resin and araldite. Ultrathin sections were cut with glass knives on the Porter Blum MT ultramicrotome and they were picked up on the copper grids. These sections were then stained with urynyl acetate followed by lead citrate and examined with JEM–7 A, JEM–100 U JEM -100 C electronmicroscopes.

Cells which stained bright red with erythrosin and carmoisine were seen distributed predominantly in the midlateral regions of the gland. On the basis of these tinctoreal affinities and other criteria described earlier[1], they were identified as LTH cells. Many stages of mitosis were encountered among these cells in the pregnant (Figs. 1 and 2) and lactating mice. Electronmicroscopy revealed sparse occurrence of follicular cell and undifferentiated cells in the hypophysis of pregnant and lactating mice. All the cell types including small and undifferentiated cells contained secretory granules in variable concentration (Fig. 3).

Everett and Baker[7] believed that the prolactin cells are formed from the stock of chromophobes during pregnancy and lactation. Schelin and Ludin[8] considered that both prolactin and growth hormone are secreted by the same cell type or that they are derived from the common progenitor. Stratman *et al.*[9] showed autoradiographically that in rat the uncommitted mammotrophs are destined to transform into typical mammotroph under the influence of estradiol. Takasaki[10] traced the entire course of cell conversion of acidophils into prolactin cells in rats. He also pointed out the possibility of derivation of prolactin cells from the follicular cells. In an earlier communication Madhyastha and Dutt[1] have shown that the LTH cells are distinguishable from STH cells by their tinctorial affinities. Further, they have reported that at no time any cell type revealing staining characteristics intermediate between LTH and STH cells was noticed. These observations preclude the possibility of the origin of prolactin cells from the stock of pre-existing STH cells.

In the pars distalis of *M. platythrix* practically all the cells contained granules in the cytoplasm, though their concentration varied among the cell types. Thus, the so called chromophobes do not form a distinct cellular category in this species. It is

equally interesting to note that the follicular cells or undifferentiated cells are sparse in the hypophysis of pregnant and lactating mice. Lastly, the one observation that provokes considerable interest is the occurrence of mitotic activity within the region of higher concentration of LTH cells in the pars anterior.



FIGS. 1–3. Fig. 1. A portion of the pars distalis of pregnant mouse showing the LTH cells in various stages of mitosis. Formol-sublimate, toluidine blue, × 200, Fig. 2. A metaphase plate from the previous figure enlarged. Formol-sublimate, toluidine blue, × 800, Fig. 3. A low power electronmicregraph of the pars distalis of pregnant mouse showing secretory granules in all cells. Glutaraldehyde, Urynyl acetate × 2,800.

On the basis of the above findings it is reasonable to conclude that the increase in LTH cells during pregnancy and lactation is not unrelated to the pre-existing stock of LTH cells through mitosis.

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A NEW RECORD OF *CLETOCAMPTUS DEITERSI* (RICHARD, 1895) (COPEPODA: HARPACTICOIDA) FROM INDIA

WHILE engaged in study of systematics and ecology of copepod fauna of Guntur and its environs (Andhra Pradesh) during 1975–77, we encountered specimens of both sexes of *Cletocamptus deitersi* (Richard, 1895) in small numbers in the surface layers of Lake Kolleru (latitudes 16° 32′ and 16° 47′ N and longitudes 81° 4′ and 81° 22′ E) at Kolletikota in all the months from August 1973 to July 1974. The specimens agree with the figures and description given by Lang[2] and Hamond[1]. Since the species is one already well defined, presenting no problem of identification, any mention of its characters appears redundant.

The presence of this supposedly brackishwater species in the freshwater lake may be due to its being introduced into the lake by the influx of sea water from Bay of Bengal *via* Upputeru. This is the first report of the species from freshwater and India. An interesting feature is that all the specimens examined were infected with the ciliophore, *Thecacinata* sp.

Recording of this species in Lake Kolleru, indicates its euryhaline nature and probably cosmopolitan distribution. This has been recorded earlier from West Indies, Guatemala, Uruguay, Argentina, Pagonia, Hawaii Island and Australia.

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