

ment striated and bears setae. Tritosternum with hyaline border, base  $157\ \mu$  long,  $135\ \mu$  wide, lacina  $108\ \mu$  long and pubescent. Sternal shield  $157\ \mu$  long,  $135\ \mu$  wide, reticulate bearing three pairs of setae and a pair of long projections on its posterior margin. Genital shield tapering posteriorly with a pair of genital setae, genital shield  $112\ \mu$  wide. Anal shield with para and postanal setae being unequal. Peritreme extends little beyond coxae III, peritrematal shield free anteriorly.

Chaetotaxy of legs normal. Length/width (in  $\mu$ ) of leg segments :

	I	II	III	IV
genu	155/67	121/63	126/49	180/54
tibia	157/63	126/58	58/45	63/40
tarsus	247/40	180/45	193/36	247/28

Coxae II with strong spine anteriorly.

*Male* : Cheliceral digits edentate. Dorsal shield  $877\ \mu$  long. Chaetotaxy more or less as in female. Unsclerotized integument of dorsum bears setae. Base of tritosternum  $90\ \mu$  long, lacina pubescent. Holoventral shield  $697\ \mu$  long,  $180\ \mu$  wide, para and postanal setae almost of equal length. Peritreme extends upto coxa II, peritrematal shield free anteriorly and fused posteriorly with podal shield of coxa II. Chaetotaxy of male normal. Length/width (in  $\mu$ ) of leg segments :—

	I	II	III	IV
genu	135/58	168/67	99/50	94/40
tibia	135/50	99/54	54/36	49/40
tarsus	135/36	148/32	117/29	144/27

*Holotype* : Female and one paratype male, India, West Bengal, Suri Vidyasagar College campus from soil debris on 3. vi. 1973 (coll. S. K. Banerjee), to be deposited in Zoological Survey of India, Calcutta. This mite was reported to bite on leg and sucking blood of the collector.

*Remarks* : This species is easily recognised from the other known species of this genus by the pit like highly developed anterior lateral structure in the dorsal plate of the male. Besides, the projections on the posterior margin of the sternal shield of female are also very distinctive.

Thanks are due to the Director, Zoological Survey of India, for the facilities, to Dr. F. J. Radovsky, B. P. Bishop Museum, Honolulu, Hawaii, for valuable

suggestions regarding placement of the species in the genus and to Dr. S. K. Banerjee, for placing the material at the disposal of the author for study.

Zoological Survey of India,  
14, Madan Street,  
Calcutta 700 013,  
October 23, 1978.

S. K. GUPTA\*.

\* Presently in Zoological Survey of India, G.P.R. Station, Patna-16.

#### EFFECT OF LYSINE-ARGININE AND GLUTATHIONE ON THE GROWTH OF OOCYTES OF THE FISH *ANABAS TESTUDINEUS* (BLOCH)

LYSINE and arginine are among the essential amino acids for trout and salmon<sup>1-3</sup>. These two amino acids have also been shown to play some role in sexual maturation<sup>4</sup>, reproduction<sup>5</sup>, and weight gain during pregnancy in mammals. Glutathione, which is a widely distributed intracellular tripeptide, is used for the translocation of amino acids across the cell membrane<sup>6</sup>. In this work, we report the effect of intraperitoneal injections of lysine-arginine and glutathione on oocyte and ovarian growth of the climbing perch, *Anabas testudineus* (Bloch). As the breeding season of *A. testudineus* extends from May to August<sup>9</sup>, the effect of lysine-arginine injections was observed during this season. But glutathione was injected during the pre-breeding period (February–May).

Apparently healthy specimens of *A. testudineus* were collected every month from nearby ponds and three groups of fishes of the length 12–16 cm were maintained in the laboratory. Each member of a group of four fishes was intraperitoneally injected with 2 mg of glutathione dissolved in 0.5 ml distilled water. Similarly another group of four fishes was intraperitoneally injected with 0.5 ml (4 mg/ml) of aqueous solution of 1:1 lysine and arginine (w/w). These injections were given every alternate day. A third group of fish served as the control. After 15 injections, the fishes were sacrificed. The ovary of each fish was removed and weighed to the nearest mg. It was cut out into anterior, middle, and posterior parts and fixed for 12 h in Carnoy's fluid for histological examination. Serial sections (6  $\mu$ m) of the pieces of all the control and experimental fish were stained with haematoxylin-eosin and the oocyte diameter was measured by means of ocular micrometer at an interval of 50  $\mu$ m.

Results of the present study indicate that oocytes of 400–500  $\mu$ m in diameter are much greater in number in the fish injected with lysine-arginine (Fig. 1). The present study, however, cannot determine the exact

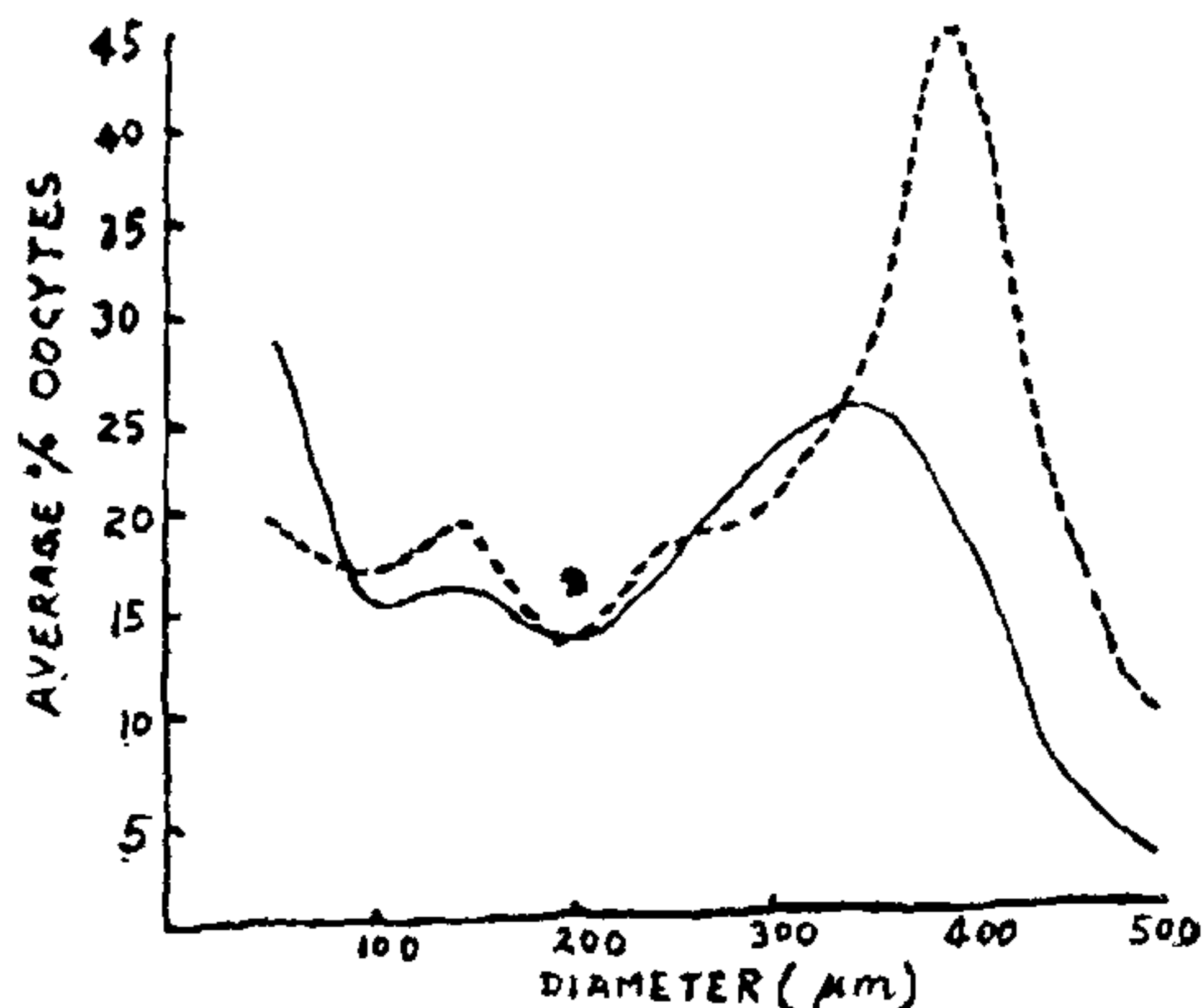


FIG. 1. Average of the per cent oocytes of different diameters in the ovary of *A. testudineus* observed from May to August. (—) Control; (----) Lysine-arginine injected.

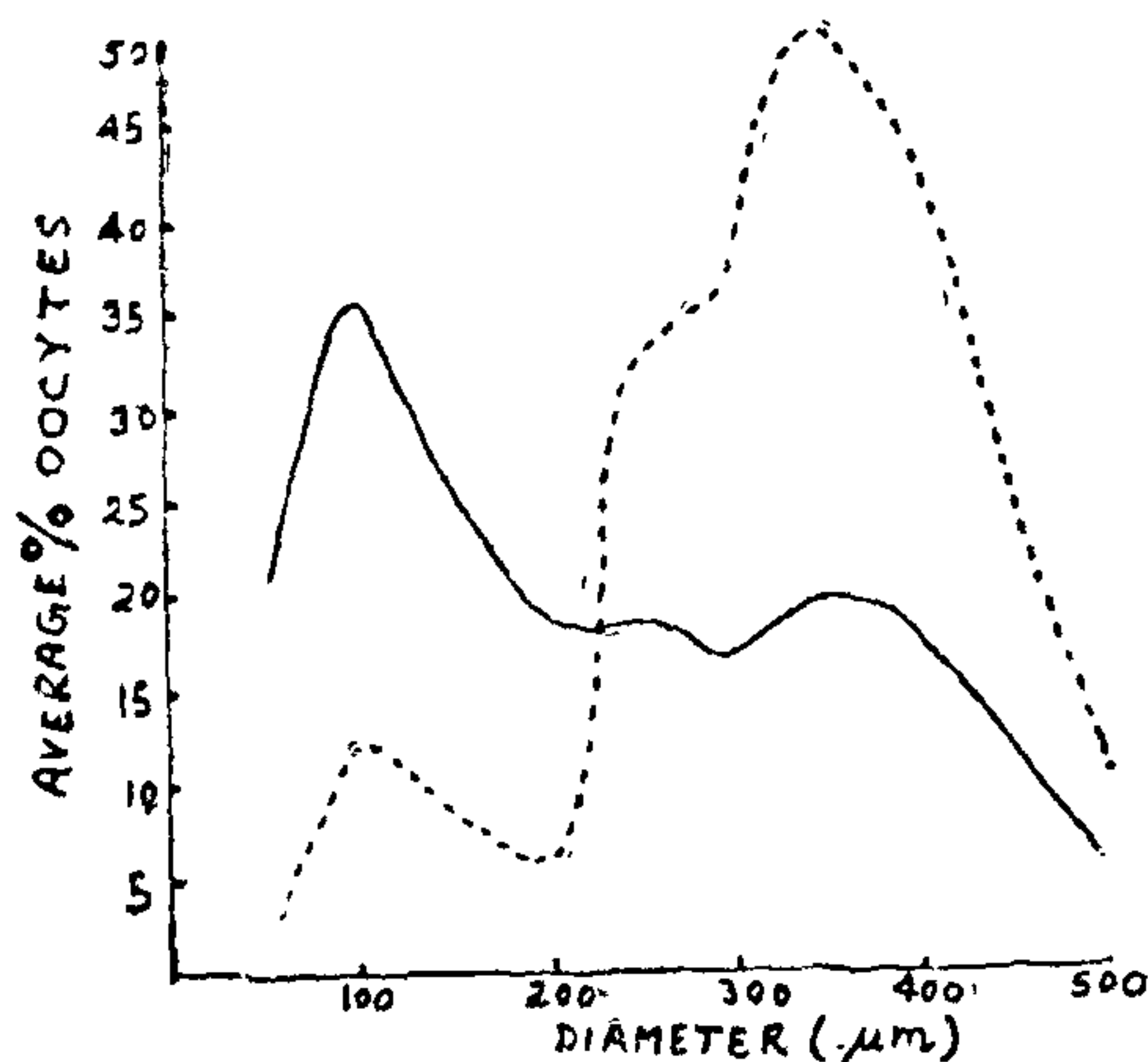


FIG. 2. Average of the per cent oocytes of different diameters in the ovary of *A. testudineus* observed from February to May. (—) Control; (----) Glutathione injected.

role of lysine-arginine in promoting growth of the oocytes of 400–500 µm in diameter. High concentrations of the amino acids have been used in the present experiment and, therefore, the possibility of these amino acids playing a nutritive role in the development of oocytes cannot be ruled out. Glutathione injections too have caused a perceptible change in the growth of oocytes. In these fishes, oocytes up to 100 µm in diameter are much less in number than the control (Fig. 2). This is probably due to their

development into oocytes of greater diameter. But the effect of glutathione appears to be more spread out as the oocytes of 250–500 µm in diameter in the experimental fish are significantly greater in number. It might be supposed that the effect of glutathione injection on oocyte growth is non-specific and nutritive. Responsiveness of these amino acids and glutathione to oocyte growth has been studied in intra-ovarian oocytes of 50–500 µm in diameter. Extruded oocytes, found frequently in the body cavity of females, have not been taken into account. When data on the diameter of uncut ovarian as well as ovulated oocytes are collected, the effect of lysine-arginine and glutathione injections can be determined with greater accuracy. Gonado-somatic index of the experimental fish was slightly higher but the increase was not statistically significant<sup>8</sup>.

The authors thank Dr. R. K. Sharan for providing laboratory facilities. A part of this work has been taken from the Ph.D. thesis of N. S., submitted to Patna University.

Department of Zoology,  
Patna University,  
Patna 800 005, (Bihar) India,  
December 6, 1978.

N. K. MISHRA.  
N. SARDANA.

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#### RECORD OF MYRMECOPHILA ALBICINCTA VAR. CONCOLOR CHOPARD (ORTHOPTERA)

THE genus *Myrmecophila* Latreille (Gryllidae: Orthoptera) includes minute crickets that live in the nests of ants. Only three species of this genus are known from India (Wasmann<sup>1</sup>, Schimmer<sup>2</sup> and Chopard<sup>3</sup>). These include *M. acervorum* Panz. from Orissa; *M. acervorum* var. *flavocincta* Wasmn. from Kanara, S. India and *M. prenoleptidis* Wasmn. from Bombay, Khandala and Ahmednagar. Bradoo and Bradoo<sup>4</sup> reported a *Myrmecophila* sp. in association with the house ant *Monomorium indicum* Forel, from Abohar, Panjab. This cricket agrees with the description of *M. albicincta* var. *concolor* described