

in the concentration of the chemical. The data also revealed that at all concentrations of the chemical the females were less affected than the males as far as the hatchability of eggs was concerned which may be probably due to the fact that most of the fully developed eggs at the time of treatment are not inhibited from further development, however, eggs in an earlier morphological or physiological stages ceased development. The results also show that although the eggs were laid by the females when either male, female or both sexes were treated with 2.0% HMAc but 100.0% sterility was observed in all cases. The adults died without oviposition when treated with 4.0% solution of the chemical.

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Pest Control Laboratory,
Department of Zoology,
M.M. Post-Graduate College,
Modinagar 201 204 (U.P.), India,
December 16, 1978.

ISLAM AHMAD,

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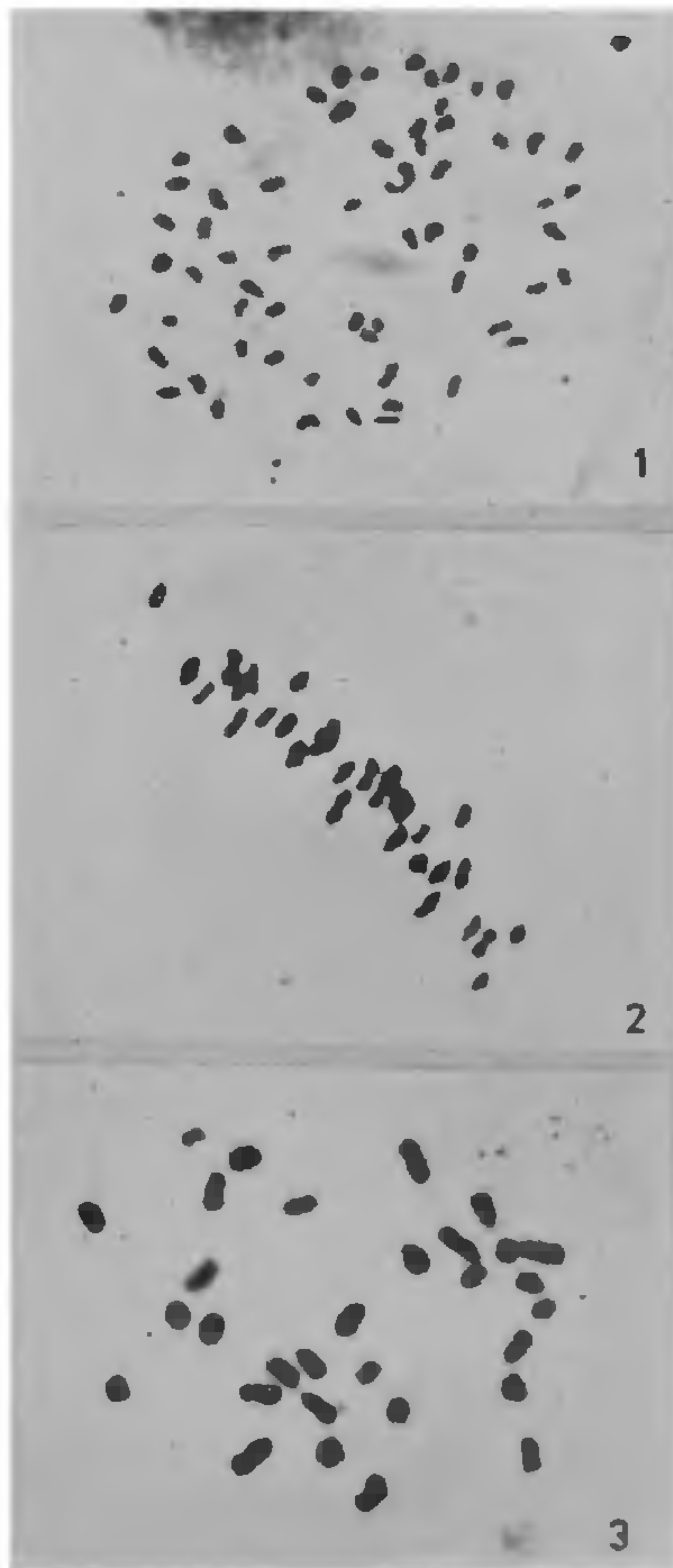
CHROMOSOME NUMBER OF *CRICULA TRIFENESTRATA* HELFER (LEPIDOPTERA: SATURNIIDAE)

THE genus *Cricula* Walker is represented in India by three species, viz., *C. drepanoides* Moore, *C. trifenestrata* Helfer (Watt¹) and *C. andrei* (Dickens and Storey²). *C. trifenestrata*, the subject of the present report, is a widely distributed form in the Indian subcontinent, thriving on several host plants, especially *Mangifera indica* Linn. and *Machilus odoratissima* Nees. (Watt¹). This genus has so far remained unstudied cytologically, possibly because of the poor quantity of silk that it produces.

The present investigations were carried out on the testes of three pupae, collected from their host plant *M. odoratissima* from Khasi hills, Meghalaya, during October–November, 1978. The cytological preparations were made by the following procedure: hypotonic pretreatment in 0.9% sodium citrate for 10–15 minutes; fixation in methanol-acetic acid (3:1) for 30 minutes; preparation of smears on pre-warmed

slides, using 45% acetic acid, the latter to help dissociate cells; staining in 2–5% Giemsa.

All the pupae studied contained several meiotic stages especially metaphase I and prophase II. The diploid chromosome number in the males is 62 as determined by a study of 10 cells at mitotic metaphase (Fig. 1), 25 cells at metaphase I (Figs. 2 and 3) and 25 cells at late prophase II. The chromosomes at mitotic metaphase appear as dot and rod-shaped elements while the bivalents of metaphase I are all dumb-bell shaped with terminalized chiasmata.



FIGS. 1–3. Photomicrographs of the chromosomes of *C. trifenestrata*. Fig. 1. Mitotic metaphase showing 62 chromosomes ($\times 1,140$). Figs. 2 and 3. Metaphase I showing 31 bivalents ($\times 1,500$).

In the family Saturniidae, the chromosome number ranges from $n = 13$ in *Philosamia cythia* to $n = 49$ in *Antheraea perni*. From the meagre cytological data available so far, the chromosome number appears to have been conserved in the genus *Platysamia* because in all four species of this genus so far studied, the number is $n = 31$ (Robinson³). The same chromosome number has also been reported in at least one species of the following genera: *Automeris*, *Dictyoploca* (Robinson³), *Actias* (Deodikar *et al.*⁴) and *Cricula* (present paper). Interspecific variation in chromosome number has been observed in *Philosamia* ($n = 13-14$) and *Antheraea* ($n = 15-49$), in the latter, 4 species out of 8, have $n = 31$ (Jolly *et al.*⁵⁻⁶). From the above cytological data it seems probable that the modal number for the genera *Platysamia*, *Dictyoploca*, *Automeris*, *Actias*, *Antheraea* and *Cricula* is $n = 31$. The karyotype of *Philosamia* ($n = 13-14$) should be compared with those of the above genera to ascertain whether its karyotype could have been derived from one with a modal number of thirty-one.

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Department of Zoology,
University of Jodhpur,
Jodhpur 342 001, India,
January 10, 1979.

R. C. NARANG.
M. L. GUPTA.

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REVIEWS

The Indian Astronomical Ephemeris for the year 1979. (The Controller of Publications, Civil Lines, Delhi 110 054). Pp. xviii + 476. Price: Inland Rs. 30-00, Foreign £ 3-50 or \$ 10-80.

"Indian Astronomical Ephemeris for the year 1979", does not show any welcome change from the earlier publications except in its title. The printing and get up continues to be of poor quality, and numerous mistakes are seen as one glances through the pages. No signs of implementation of the suggestions of the special committee appointed by the Indian National Science Academy for improvement of the publication are noticed in this issue.

One glaring example of the carelessness may be seen on page 309 giving local circumstances of the lunar occultation events of Aldebaran. Besides being incomplete, the tables contain several values of moon's age, moon-rise and moon-set times which are obviously wrong. A little care in checking the final tables would have avoided this type of errors.

On pages 388-389 are listed the co-ordinates of important places in India. It is to be expected that the list should contain details about the places where active astronomical observational work is conducted in India. No attempt has been made to update this list by addition of details of new places where such work is being done. Kavalur, Ootacamund, Gauri-

bidanur, Mount Abu, Udaipur are some of the places which should have been included in the list.

It is high time that the concerned authorities pay more attention to remove persistent defects and shortcomings of this publication to bring it up to the standard expected of a national effort of this kind.

J. C. BHATTACHARYYA.

Biochemistry. By S. K. Dasgupta. (The Macmillan Company of India Limited, 4, Community Centre, Naraina Industrial Area Phase I, New Delhi 110 028); Volume 1—1977, Pp. viii + 443, Price: Rs. 25-75; Volume 2—1977, Pp. viii + 312, Price: Rs. 17-25; Volume 3—1978, Pp. viii + 276, Price: Rs. 16-00. (Low Cost University Editions).

Biochemistry by S. K. Dasgupta in 3 volumes is a comprehensive text with emphasis on clinical aspects of biochemistry. The author has purportedly designed the book to serve the students of medicine majoring in biochemistry. This is evident from the large coverage given to topics such as body fluids, tissues and organs, and digestion and absorption (volume 2). Volume 1 deals primarily with the chemistry of the biological compounds—carbohydrates, lipids, proteins, 'nucleoproteins'; enzymes, vitamins and hormones. Volume 3 deals with the metabolic aspects. In addition,