

EFFECT OF A JUVENILE HORMONE ANALOGUE, METHOPRENE ON THE MALE REPRODUCTIVE ORGANS OF THE COTTON STAINER, *DYSDERCUS KOENIGII* (F)

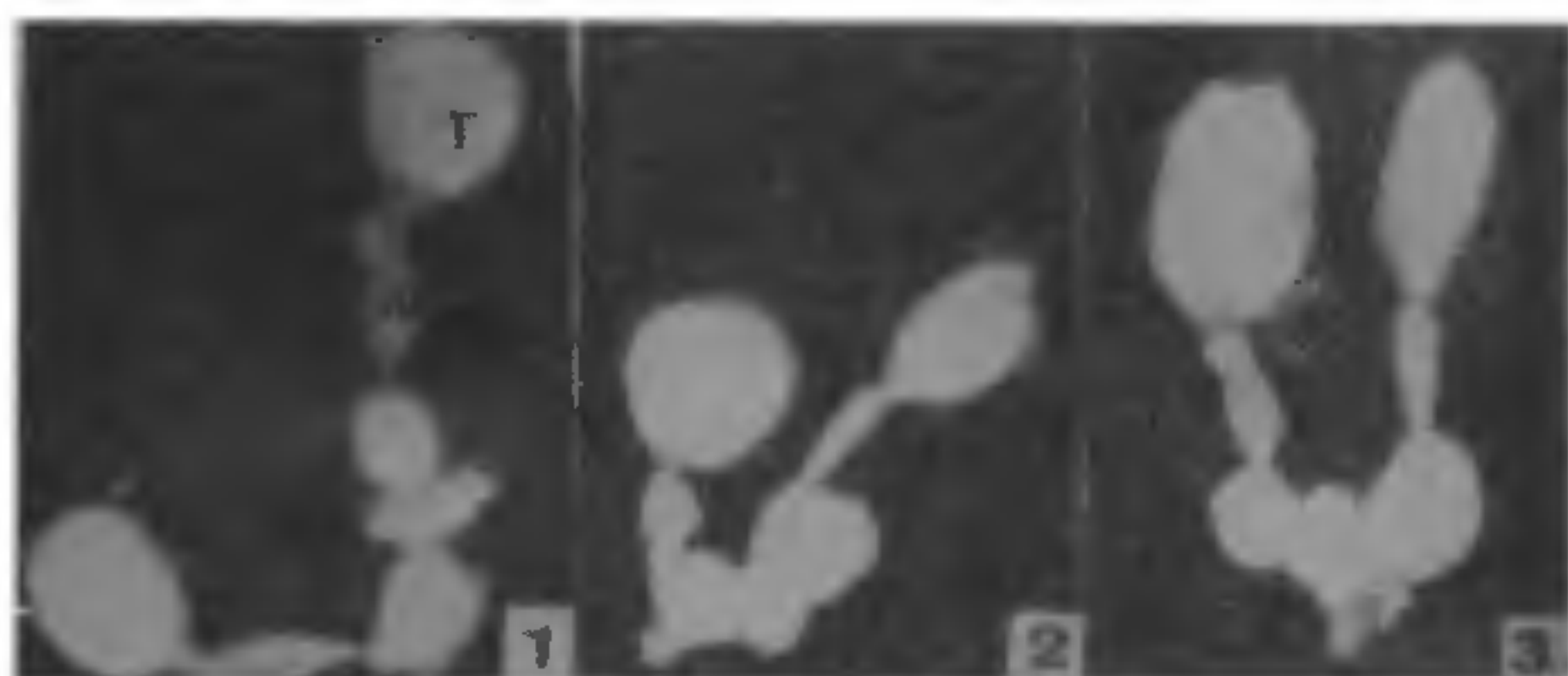
D. REVATHY, S. S. THAKUR, B. KISHEN RAO AND G. MARUTHI RAM

Entomology Section, Department of Zoology, Osmania University, Hyderabad 500 007, India.

JUVENOIDS, as third generation pesticides was first suggested by Williams¹. These juvenoids when applied at a particular stage of the life cycle, disturb the life processes such as embryonic development, larval development, metamorphosis and reproduction². This paper deals with the morphogenetic activity of the juvenile hormone analogue, Methoprene on the male reproductive organs of the cotton stainer, *Dysdercus koenigii* (F).

The test insects were reared in the laboratory under controlled conditions ($28 \pm 1^\circ$ C temperature, $70 \pm 5\%$ relative humidity and 12 hr photoperiod). Newly eclosed adult males were given a topical application of the juvenoid, Methoprene [1μ l/sp(1μ g)]. The requisite concentration was prepared in acetone. The treated insects and the stock culture were fed on soaked cotton seeds. These treated bugs were sacrificed on the 6th day after the treatment.

The testis lobes of the treated insects were abnormal in size. The vas deferens was the most severely affected part of the male reproductive system. It was bilobed in the majority of the cases, and in a few cases it was short and tube-like. Not much difference was observed in the accessory glands.



Figures 1-3 Male reproductive organs of the treated adults dissected on the fifth day after the treatment. **1.** Note the bilobed vas deferens. (15x). **2.** Note the short and tubular vas deferens (15x) **3.** Note the difference in the size and shape of the testis lobes and the deformed, twisted (arrow) vas deferens. (15x) (T-Testis, VD-Vas Deferens)

The effect of juvenile hormone analogues on the male reproductive organs has not been studied extensively. Involvement of juvenile hormone in spermatogenesis is doubted by a few workers, while Engelmann³ and Srivastava⁴ and Judson *et al*⁵

reported the morphological deformities in the male reproductive organs for the first time in *D. cingulatus* using a juvenile hormone analogue. The results obtained in our studies support the report of the above workers. Similar findings were obtained by applying JH mimics on *D. cingulatus* by Maruthi Ram *et al*⁶ and Ashok *et al*⁷.

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NEW RECORDS OF TWO GENERA OF COLONIAL ASCIDIANS FROM INDIA

T. K. RENGANATHAN AND J. A. DANIEL
Department of Zoology, V.O. Chidambaram College, Tuticorin 628 003, India.

THE present note deals with two genera of colonial ascidians *Aplidium* (Savigny, 1816) and *Sidnyum* (Savigny, 1816). A perusal of literature¹⁻⁸ on Indian ascidians reveals that these 2 genera have not been reported so far from India. *Aplidium* is now recorded at Mandapam and *Sidnyum* at Tuticorin in the south-east coast of India.

The taxonomical position of these two genera is as follows:

Class: Ascidiacea; Order: Enterogona; Suborder: Aplousobranchiata; Family: Polyclinidae; Subfamily: Polyclininae; Genus: *Aplidium* and *Sidnyum*.

Psammaplidium and *Amaroucium*⁹ are considered to be synonyms of *Aplidium*.

While *Aplidium* has a wide distribution with its many species, *Sidnyum* has very few species¹⁰ and is not represented in many parts of the world.

The following are the important common generic characters of the genera:

Zooids embedded—no papillae on transverse branchial vessels—stomach with longitudinal folds—ovary anterior to testis in postabdomen—larvae developed in atrial cavity.

The number of lobes in the oral siphon is the main generic character distinguishing these two genera. *Aplidium* has 6 lobes whereas *Sidnyum* has 8.

Aplidium was seen attached to the alga, *Enhalus* sp. at Mandapam and *Sidnyum* to a large boulder in deeper waters at Tuticorin harbour. While several colonies of *Aplidium* were collected, only a single colony of *Sidnyum* was available.

Our thanks are due to Dr. R. H. Millar of Dunstaffnage Marine Research Laboratory, Oban, Argyll,

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ANNOUNCEMENT

SILVER JUBILEE CELEBRATION OF EQUATORIAL MAGNETIC OBSERVATIONS IN INDIA

A Workshop on "EQUATORIAL ELECTROJET" is proposed to be held by the Indian Institute of Geomagnetism, Bombay during November 18-21, 1982 to celebrate 25 years of operation of Trivandrum and Annamalainagar observatories of this Institute.

Systematic study of the geomagnetic field started in India with the commissioning of one the world's oldest and most important magnetic station, the Colaba Observatory in Bombay, in 1846. Since then, Indian contribution to the science of geomagnetism has gone a long way and we now have a chain of magnetic stations in the Indian sub-continent starting from the Gulmarg Observatory (Latitude 34° 05' N, Longitude 74° 50' E) at far north to the Trivandrum Observatory (Latitude 8° 29' N, Longitude 76° 57' E) at the south. In between six other magnetic stations under IIG continuously monitor and record the slightest variation of the geomagnetic field with precision instruments. These data have been and still are invaluable in understanding the immense complexity of the geospace as well as the solid earth.

The intense ionospheric current known as "EQUATORIAL ELECTROJET" flowing almost parallel to the geomagnetic equator, is one of the most important geophysical phenomena. Since there are a number of magnetic observatories in the neighbourhood of the

geomagnetic equator it is felt to bring together the scientists concerned for a comprehensive discussion and review the understanding of this unique geophysical phenomenon.

The four day workshop proposed to coincide with the Silver Jubilee Celebration will consist of six scientific sessions, devoted to invited talks and contributed papers. Emphasis will be given on the discussion, rather than mere presentation of a paper.

The sessions are tentatively classified under the following headings: (1) Inaugural Session; (2) Sq current system: Theoretical understanding and observational progress; (3) Equatorial Electrojet: Theory and Interpretation; (4) Counter Electrojet; (5) Equatorial Ionosphere with reference to the electrojet current system; (6) Coupling of the low latitude ionosphere with the magnetosphere, the high latitude ionosphere and with the interplanetary space; (7) Miscellaneous topics; (8) Concluding Session.

It is proposed to bring out the proceeding for the workshop.

Further particulars may be had from Shri M. Roy, The Organising Committee, Workshop on 'Equatorial Electrojet', Indian Institute of Geomagnetism, Colaba, Bombay 400 005.