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## 23. ADDITIONAL NOTES ON A HIMALAYAN SATYRID *DALLACHA HYAGRIVA* (MOORE) FAMILY SATYRIDAE, LEPIDOPTERA

(With five text-figures)

The type species *hyagriva* Moore of the monotypic genus *Dallacha* Moore (Smith, 1993; Varshney, 1994) has been reported earlier under the genus *Erebia* Dalman by Bingham (1905), Evans (1932), Talbot (1947), Wynter-Blyth (1957) and Mani (1986). Its distribution has been recorded from various Himalayan localities, such as Darjeeling, Kulu, Mussoorie, Simla and Kumaon (Marshall and de Niceville, 1883; Mackinnon and de Niceville, 1897; Evans, 1932; Wynter-Blyth, 1940; Talbot, 1947). Marshall and de Niceville (loc. cit.) have also stated that "*hyagriva* Moore was originally described from Darjeeling, but we have only as yet received it from the Western Himalayas, where it does not appear to be common." During the present survey, we could collect it from certain new localities, such as Kumarsain (2 males, 1 female, 8.ix.1992), Taklech, Rampur (1 female, 12.ix.1992), and Chowai (1 male, 13.ix.1992) in the Western Himalaya. An illustrated account of the male and female genitalia is given below in order to facilitate diagnosis.

Brown Argus *Dallacha hyagriva* (Moore)  
Moore, 1857, in Horsfield & Moore,  
Cat., Lep. Inds. E. India Co. 1: 236.

**Male genitalia:** (Figs 1-4): Uncus longer than tegumen, curved ventrally, distal end sharply pointed; brachia more than half the length of uncus, finely pointed distally; tegumen

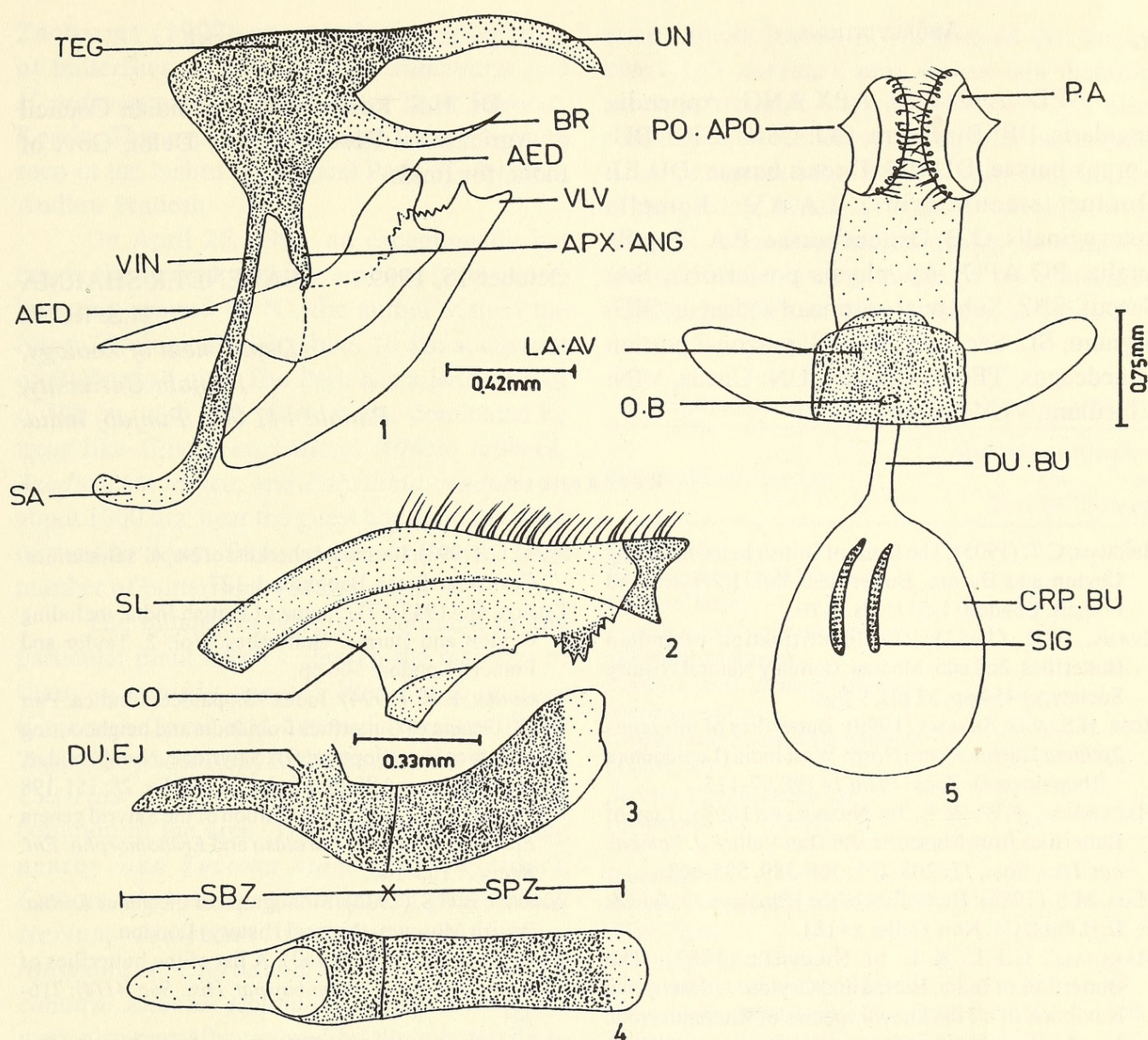
broad; appendices angulares moderately long with distal end narrow; vinculum longer than tegumen; saccus short, tubular, rounded; valva broader in the middle, costa distinct with a smaller costal process, sacculus long and narrow, distal end concave, the latter beset with eight dorsal spines present near distal end; aedeagus long and broad, curved in the middle, subzone smaller than suprazone, ductus entering dorsad.

**Female genitalia:** (Fig. 5) Corpus bursae globular, membranous; signa paired and moderately long, represented by parallel scobinate patches, lying longitudinally in the posterior half of corpus bursae; ductus bursae shorter than corpus bursae, membranous; lamella antevaginalis with rectangular, plate-like, conspicuous central process, below which another slightly longer process, the latter lateral, broad, flap-like membranous; lamella postvaginalis inconspicuous; apophyses anterioris missing, apophyses posterioris reduced; papilla analis elongated, pilose.

Length of forewing Male: 21.0 mm

Female: 25.0 mm

The present study shows that the male genitalia of the type species *hyagriva* Moore of the genus *Dallacha* Moore are different from the type species *Erebia ligea* Linn. and *Ypthima huebneri* Kirby of the genera *Erebia* Dalman and *Ypthima* Huebner respectively (Warren, 1930, 1936; Rose and Sharma, 1999) under which it has earlier been synonymised by Talbot (1947) and Bingham (1905)



Figs 1-5: *Dallacha hyagriva* (Moore): 1. Male genitalia (lateral view) 2. Valva (inner view) 3. Aedeagus (lateral view) 4. Aedeagus (dorsal view) 5. Female genitalia (ventral view).

respectively. In the former species, the uncus is longer than the tegumen, and convex in shape and the same is straight and shorter than the tegumen in the latter species. In *ligea* Linn., the brachial area is parallel to the uncus and the aedeagus is straight or slightly undulating, whereas the brachia do not run parallel to the uncus and the aedeagus is strongly curved in *hyagriva* Moore. In

*huebneri* Kirby, the brachia are completely wanting and the aedeagus rather weakly curved. The female genitalia of *D. hyagriva* (Moore) and *Y. huebneri* Kirby are also different from each other. In *Y. huebneri* the signum is absent, and the genital plate is very complex, whereas the paired signa are present and the genital plate is simple in *D. hyagriva*.

ABBREVIATIONS

AED: Aedeagus, APX.ANG: Appendix angularis, BR: Brachium, CO: Costa, CRP. BU: Corpus bursae, DU.BU: Ductus bursae, DU.EJ: Ductus ejaculatorius, LA.AV: Lamella antevaginalis, O.B: Ostium bursae, P.A.: Papilla analis, PO.APO: Apophysis posterioris, SA: Saccus, SBZ: Subzonal portion of aedeagus, SIG: Signum, SL: Sacculus, SPZ: Suprazonal portion of aedeagus, TEG: Tegumen, UN: Uncus, VIN: Vinculum, VLV: Valva.

ACKNOWLEDGEMENT

Dr. H.S. Rose thanks the Indian Council of Agricultural Research, New Delhi, Govt of India, for funds.

October 15, 1999

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## 24. AN AGGREGATION OF BUTTERFLIES AT HYDERABAD, ANDHRA PRADESH

Butterflies are known to be closely associated with plants. They are attracted to flowers for nectar, and their developmental stages are often spent on them. Barnes (1939) observed that a large number of danaid butterflies are attracted to *Cynoglossum denticulatum* at Biligirirangan hills, Karnataka. Wynter-Blyth (1957) reported that butterflies are attracted to the trees of *Bridelia* in the Himalaya, and to

*Poinsettia* and *Moringa* at lower elevations. Amladi (1975) noted that danaid butterflies are attracted to *Heliotropium indicum* plants. Chaturvedi and Satheesan (1979) published a note on the congregation of butterflies on *Crotalaria retusa* in the Western Ghats, while Larsen (1986) observed a dry season aggregation of these insects in Corbett National Park, Uttar Pradesh. Subsequently Jafer, Mathew and



Sharma, Narender and Rose, H S. 2000. "23. Additional Notes on a Himalayan Satyrid Dallacha Hyagriva (Moore) Family Satyridae, Lepidoptera." *The journal of the Bombay Natural History Society* 97, 448–450.

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