DESCRIPTION OF THE FEMALE IMAGO AND EGGS OF

**INDIALIS BADIA PETERS & EDMUNDS**

*(EPHEMEROPTERA: LEPTOPHLEBIIDAE)*

K. G. Sivaramakrishnan*
Florida A&M University, Tallahassee, FL 32307, USA

ABSTRACT. The previously unknown female imago and egg of

*Indialis badia* are described. An additional locality is given for the

species in South India.

Peters and Edmunds (1970) established *Indialis* with *Indialis badia*

Peters and Edmunds as the type-species. The species description was

based on one male subimago and 49 nymphs collected by Dr. and Mrs.
Peters in Kerala and Andhra Pradesh, India. Peters and Edmunds (1970)

included the subimaginal description, as the one subimago died during

subimaginal moult and the genitalia and abdomen were fully out of the

subimaginal skin before death.

The female imago and egg structure of the same species are describ­
ed herein. The nymphs and adults are associated by rearing. An

additional locality is given for the species in Tamil Nadu (Madras State)
in South India.

*Indialis badia* Peters & Edmunds  (Figs. 1-8)

*Indialis badia* Peters & Edmunds, 1970. Pacific Ins., 12: 209; Peters,

Female imago (in alcohol). Length: Body, 6.0 mm; fore wing, 7.0mm.

Head light brown with blackmarkings along median area of vertex. An­
tennae pale yellow, scape and pedicel washed with brownish yellow. Eyes
indigo, separated on meson of head by a length 2.5x as great as maxi­
mum width of an eye. Basal half of ocelli black, apical half white. Thorax
dark brown; carinae of pleurae and pronotum washed with black. Colour
and markings of legs as in male imago, except colour of maculae and
bands darker. Wings with longitudinal veins of fore and hind wings
light brown, darker near base; cross-veins of fore wing light brown;
membrane of fore and hind wings hyaline, brown at base, except cells
C and Sc of fore wings washed with light brownish yellow. Abdomen with
terga 1-9 washed with dark brown, with a greenish tint, lateral and
posterior margins darker; a lighter, median, longitudinal band on anter­
or half of terga 2-8, band becoming wider progressively; sternum brown.
Ninth sternum shallowly cleft apically, with a median furrow (Fig. 5);
ninth sternum dark brownish yellow with dark brown lateral edges.
Caudal filaments brownish yellow.

Eggs (in Hoyers): Chorion with longitudinal sinuous ridges (Fig.6).
Attachment structures (Fig. 8) circular or subcircular, sucker-like at
both polar ends. Micropylar device (Fig. 7) funnelform, rim 11.5-12.0
μm in diameter.

* Present address: Dept. of Zoology, Madura College, Madurai 625011,
India. For reprints contact Dr. W. L. Peters, Florida A.& M. Univ.,
Tallahassee, FL. 32307, USA.
Specimens: India: Tamil Nadu: Thamraparani River, Papanasam, 250m, 2 M imagos, 2 F imagos, and 9 nymphs, 19.iii.1978, K.G.Sivaramakrishnan. All specimens in alcohol. Nymphs and imagos associated by rearing. 1 male imago, 1 female imago, and 5 nymphs deposited in Florida A&M University. 1 male imago, 1 female imago, and 4 nymphs in Sivaramakrishnan collection, Entomology Institute, Loyola College, Madras.

Discussion: The imago of I. badia is not redescribed as it is in conformity with the subimaginal description given in Peters and Edmunds (1970). They stated that the eyes of badia meet on meson of the head. Subsequently Peters (1975) pointed out that the head of the subimaginal holotype is shriveled and the eyes of badia might be separated on the meson of the head. The eyes of the male imago, reported herein are separated on the meson of head by a length equal to 0.25 the width of the median ocellus. The claws of the male imaginal fore legs are as in Fig. 4; and the male genitalia is as in Fig. 1. Variation in the shape of the apex of the penes between Fig. 98 of Peters and Edmunds (1970) and Fig. 2-3 may well be variation in imaginal age.

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REFERENCES


Figs. 1-4. *Indialis badia*, male imago: 1, ventral view of genitalia; 2-3, apex of penis, ventral and dorsal views; 4, claws of fore leg. Fig. 5, *Indialis badia*, ninth sternum of female imago.
Figs. 6–8. Indialis badia, egg: 6, entire; 7, portion showing micropyle; 8, portion showing attachment structures.