

GENERAL NOTES

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LARVAL DESCRIPTION AND HOSTPLANT RECORD FOR *ITHOMIA DIASIA* HEWITSON (NYMPHALIDAE: ITHOMIINAE) IN PANAMA

Additional key words: pupa, *hippocrenis*, *Witheringia*, Solanaceae.

Despite the fact that butterflies in the genus *Ithomia* Hübner participate in well documented mimicry rings (e.g., Beccaloni 1997) and are therefore important players in community level interactions that characterize the Neotropics, information on their larval biology is scarce. All known *Ithomia* immatures feed on Solanaceae (Table 1, Brown and Freitas 1994, G. Beccaloni pers. comm.). We found no published host plants records for the remaining Central American species of *Ithomia*, and brief descriptions of immatures are available only for *I. patilla* and *I. heraldica* (see DeVries 1987).

On 18 February 1995 (dry season) we collected a fourth instar larva of *Ithomia diasia hippocrenis* Bates on *Witheringia asterotricha* (Standl.) (Solanaceae) on the Atlantic slope just below the Continental Divide near El Cope, Panama (800 m elevation). The range of *I. diasia hippocrenis* includes Panama and Costa Rica, and in Costa Rica it is distributed from sea-level to 1,400 m on the Atlantic slope, reaching greater abundance in the dry season (DeVries 1987). On 2 March 1995, an adult male emerged from the pupa, and was subsequently compared to specimens in the collection of the Natural History Museum, London (BMNH). The emerged male was similar to two specimens from highland Panama except for the black (rather than brown) triangular marking from the forewing costal margin to the distal end of the discal cell in the ventral surface of the forewing (see photograph of *I. diasia* in DeVries 1987). Of the 20–30 specimens of *I. diasia hippocrenis* at the BMNH, only one from Costa Rica also had the same black triangular marking, and we expect that this represents a rare variant of the phenotype.

The host plant, *Witheringia asterotricha*, occurs in moist upland forest, and the plants have a purplish appearance caused by purplish dendroid hairs on stems and leaves (visible in Fig. 2) and a bluish cast to the epidermis (D'Arcy 1973). D'Arcy (1973) considered *Witheringia asterotricha* to be a variety, of *W. solanaceae*. Hybrids of these two species are reported to occur in disturbed areas (D'Arcy 1973).

In the laboratory the larva was reared in a plastic container at ca. 23°C, and fed *ad libitum* on leaves that were kept in a plastic bag in the refrigerator. Note that developmental time in the laboratory is

TABLE 1. Host plant records of *Ithomia* from Central America.

Species	Host plant	References
<i>I. patilla</i>	<i>Witheringia solanacea</i>	Drummond & Brown 1987
	<i>Witheringia</i> sp.	Drummond & Brown 1987
	<i>Lycianthes multiflora</i>	Drummond & Brown 1987
<i>I. xenos</i>	<i>W. cuneata</i>	Drummond & Brown 1987
	<i>Acnistus arborescens</i>	Drummond & Brown 1987
	<i>Cuatresia riparia</i>	Drummond & Brown 1987
<i>I. iphianassa</i>	<i>C. riparia</i>	Drummond & Brown 1987
	<i>C. morii</i>	Drummond & Brown 1987
	<i>A. arborescens</i>	Drummond & Brown 1987
<i>I. celemia</i>	<i>C. riparia</i>	Drummond & Brown 1987
<i>I. diasia</i>	<i>L. heteroclita</i>	DeVries 1985
	<i>W. solanacea</i>	Drummond & Brown 1987
	<i>W. asterotricha</i>	Srygley & Penz 2000



FIG. 1. Fifth instar larva of *Ithomia diasia* from Panama. FIG. 2. Pupa of *Ithomia diasia* from Panama

probably distinct from that in nature due to differences in temperature regime.

Larva. *Fourth instar* (4 days, n = 1). Head light gray with a black transverse stripe that starts above front and ends below stemmata, stemmata black, mandibles brown; body translucent gray with broad, opaque, light gray markings across segments resulting in banded pattern, broken, longitudinal yellow spiracular line composed of color patches of uneven size; spiracles black, ventrally transparent (tracheal system visible); thoracic legs and prolegs translucent gray. *Fifth instar* (Fig 1, 3 days, n = 1). Head same as fourth instar although more translucent in color; body black with faint banded pattern on the posterior portion of each segment, three wrinkles across segments T2–A8, broken, longitudinal yellow spirac-

ular line composed of color patches of uneven size; anal cap gray; ventrally translucent gray; thoracic legs and prolegs translucent gray.

Pupa (Fig. 2, 5 days, n = 1). Short, slightly compressed laterally, translucent green with patches of iridescent gold. Head with two small gold bumps just above eye; sutures of mouthparts and antennae dark brown; antennae with dark brown spots on each segment; T2 with gold dorsal keel and a pair of brown, dorso-lateral spots; gold patches laterally on T1-3; brown spots at the base and in the center of wing pad; four brown spots near distal margin of wing pad; T3-A8 with a pair of brown dorso-lateral spots; abdomen with gold dorsal midline band; large lateral gold patches on A1-3; spiracles brown; cremaster brown.

The broad black frontal stripe present in *I. diasia* fifth instar also occurs in other species of *Ithomia*; the broken sublateral band in the fifth instar and partially bent pupa are characteristic of the Ithomiinae tribes Ithomiini, Napeogenini and Oleriini (A. Freitas pers. comm.).

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