

## Genus *Haydonia* Pycrz & Collins, 2020 Evening Browns

*Arthropod Systematics & Phylogeny* **78** (2): 179 (171-216).

Type-species: *Papilio chelys* Fabricius, 1793, by original designation.

The genus *Haydonia* belongs to the Family Nymphalidae Rafinesque, 1815; Subfamily Satyrinae Boisduval, 1833; Tribe Melanitini Reuter, 1896. The other genera in the Tribe Melanitini in the Afrotropical Region are *Melanitis*, *Gnophodes* and *Ducarmeia*.

*Haydonia* (**Evening Browns**) is an Afrotropical genus of four species.

### \**Haydonia chelys* (Fabricius, 1793) Dusky Evening Brown

*Papilio chelys* Fabricius, 1793. *Entomologia Systematica emendata et aucta* **3** (1): 80 (488 pp.).

*Gnophodes chelys* (Fabricius, 1793). Ackery *et al.*, 1995.

*Haydonia chelys* (Fabricius, 1793). Pycrz *et al.*, 2020: 179. **comb. n.**



*Haydonia chelys*. Male. Left – upperside; right – underside.

Kakamega Forest, Kenya. 6 October 1997.

Images M.C. Williams ex J. Greyling Collection.

**Alternative common name:** Lobed Evening Brown.

**Type locality:** [Uganda]: “India”. [False locality]. Type locality given as Uganda by Ackery *et al.*, 1998. Provenance of types unknown (Pycrz *et al.*, 2020).

**Diagnosis:** Distinguished from the closely related *H. pythia* by the larger size, especially of the males, more strongly protruded outer margins of the FW along veins M2 and CuA1, and in the males, more conspicuous and better marked FWD subapical orange bands. Additionally, females of *H. chelys* are polymorphic with, in some cases, a bluish shiny reflection on the upperside, which can be quite intense in some specimens, whereas the females of *H. pythia* are invariably dull brown (Pycrz *et al.*, 2020).

**Distribution:** Cameroon, Democratic Republic of Congo, Uganda, Kenya (west).

It may occur in NW Tanzania, Rwanda, Burundi and eastern Nigeria but there are no known records (Pycrz *et al.*, 2020).

**Specific localities:**

Cameroon – Korup (Larsen, 2005a); Mount Kupe (Pyrzcz *et al.*, 2020); Koutaba (Pyrzcz *et al.*, 2020); Mass du Mbamb (Pyrzcz *et al.*, 2020).

Democratic Republic of Congo – Ituri Forest (Ducarme, 2018); Semuliki Valley (Ducarme, 2018); Central Forest Block (Ducarme, 2018); Mt Mitumba (Ducarme, 2018); Mt Blue (Ducarme, 2018); Musasa (Pyrzcz *et al.*, 2020); Beni (Pyrzcz *et al.*, 2020); Kasugho (Pyrzcz *et al.*, 2020); Kasuo (Pyrzcz *et al.*, 2020); Muleke (Pyrzcz *et al.*, 2020); Botuhe (Pyrzcz *et al.*, 2020); Kirima (Pyrzcz *et al.*, 2020); Maliva (Pyrzcz *et al.*, 2020); Maboya (Pyrzcz *et al.*, 2020); Lubabgo (Pyrzcz *et al.*, 2020); Kibale (Pyrzcz *et al.*, 2020); Mabungu (Pyrzcz *et al.*, 2020); Biakatu (Pyrzcz *et al.*, 2020); Bikava (Pyrzcz *et al.*, 2020); Kiau (Pyrzcz *et al.*, 2020); Biakoto (Pyrzcz *et al.*, 2020).

Uganda – E. Ruwenzori (Heron, 1909); Semuliki N.P. (Davenport & Howard, 1996); Katera (Pyrzcz *et al.*, 2020); Kaweri (Pyrzcz *et al.*, 2020); Kayanzu (Pyrzcz *et al.*, 2020); Itwara (Pyrzcz *et al.*, 2020); Kalinzu (Pyrzcz *et al.*, 2020); Kibale (Pyrzcz *et al.*, 2020); Bwindi Forest (Pyrzcz *et al.*, 2020); Mpanga Forest (Pyrzcz *et al.*, 2020).

Kenya – Kakamega Forest (Larsen, 1991c); Elgon (Larsen, 1991c); Kitale (Larsen, 1991c).

**Habitat:** Dense forest, including somewhat degraded forest. Submontane and lower montane forests from 1200 to 1800 m. (Pyrzcz *et al.*, 2020).

**Habits:** A fairly common butterfly. In West Africa it appears to be scarcer in the west of its range (Larsen, 2005a). Active only at dawn and dusk. During the day it hides among leaves in the forest understory. Both sexes are greatly attracted to fermented bananas (Kielland, 1990d) and small groups may be found feeding from rotting fruit along forest paths (Larsen, 1991c).

**Early stages:**

Pyrzcz *et al.*, 2020.

The entire life cycle has been recorded, but has not been formally described. Eggs are laid in clusters. First and second instar larvae are gregarious; later instars are solitary (Pyrzcz *et al.*, 2020).

**Larval food:**

*Setaria* species (Poaceae) [Larsen, 1991c: 263].

*iris* Bartel, 1905 (as female f. of *Gnophodes chelys*). *Novitates Zoologicae* **12**: 130 (129-152). Cameroon: “Kamerun, Hinterland, Jaunde-Station”. **Syn. nov.** (Pyrzcz *et al.*, 2020).

## \**Haydonia pythia* (Fabricius, 1793)

*Papilio pythia* Fabricius, 1793. *Entomologia Systematica emendata et aucta* **3** (1): 116 (488 pp.).

Synonym of *Gnophodes chelys* (Fabricius, 1793). Ackery *et al.*, 1995.

*Haydonia pythia* (Fabricius, 1793). Pyrcz *et al.*, 2020. **comb. n., stat. reinst.**

**Type locality:** Guinea.

**Diagnosis:** The characters distinguishing *H. pythia* from *H. chelys* are given under the latter species.

**Distribution:** Guinea, Liberia, Ivory Coast, Ghana, Togo, Nigeria, Cameroon, Equatorial Guinea, Gabon, Congo, Angola, Central African Republic, Democratic Republic of Congo (north-east).

**Specific localities:**

Guinea – TL; Ziama (Safian *et al.*, 2020).

Liberia – Localities are listed in Pyrcz *et al.*, 2020; Wologizi (Safian *et al.*, 2020).

Ivory Coast – Lamto (Vauttoux, 1994); Bossematie (H. Fermon, *vide* Larsen, 2005a). Additional localities are listed in Pyrcz *et al.*, 2020.

Ghana – Kakum (Larsen, 2005a); Bobiri Butterfly Sanctuary (Larsen *et al.*, 2007); Boabeng-Fiema Monkey Sanctuary (Larsen *et al.*, 2009). Additional localities are listed in Pyrcz *et al.*, 2020.

Togo – Bismarckburg (Karsch, 1893). Additional localities are listed in Pyrcz *et al.*, 2020.

Nigeria – Localities are listed in Pyrcz *et al.*, 2020.

Cameroon – Korup (Larsen, 2005a). Additional localities are listed in Pyrcz *et al.*, 2020.

Equatorial Guinea – Moko, Bioko (Pyrzcz *et al.*, 2020).

Gabon – Ipassa (Vande weghe, 2010); Ndougou (Vande weghe, 2010). Additional localities are listed in Pyrcz *et al.*, 2020.

Angola – Localities are listed in Pyrcz *et al.*, 2020.

Central African Republic – Dzanga (Noss, 1998). Additional localities are listed in Pyrcz *et al.*, 2020.

Democratic Republic of Congo – Localities are listed in Pyrcz *et al.*, 2020.

**Habitat:** Forests from sea level to 1100 m. (Pyrzcz *et al.*, 2020).

**Habits:** Nothing published.

**Early stages:**

Larsen, 2005a [Bossematie, Ivory Coast and Kakum, Ghana].

The final instar larva is pale green with bluish-green longitudinal stripes. They cluster under the broadest leaves of *Pennisetum* grass.

**Larval food:**

*Imperata cylindrica* (L.) Raeusch. (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast].

*Olyra latifolia* L. (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast; a naturalised grass].

*Pennisetum purpureum* Schumach (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast].

*Rottboellia cochinchinensis* (Lour.) Clayton (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast; as *Rottboellia exaltata*].

*Setaria barbatus* (Lam.) Kunth (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast].

*Setaria megaphylla* (Steud.) T. Durand & Schinz (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast].

*Streptogyna crinita* P. Beauv. (Poaceae) [Vuattoux, 1994; Lamto, Ivory Coast; as *Streptogyna crinita*].

*morpena* Westwood, [1851] *in* Doubleday & Westwood, [1846-52] (as sp. of *Gnophodes*). *The genera of diurnal Lepidoptera*, London: 363 (1: 1-250 pp.; 2: 251-534 pp.). London. Democratic Republic of Congo: “Congo, Ashanti”.

*elucidata* Grünberg, 1910 (as var. of *Gnophodes chelys*). *Sitzungsberichte der Gesellschaft Naturforschender Freunde zu Berlin* 1910: 469 (469-480). Equatorial Guinea: “Spanish Guinea”.

**\**Haydonia harpa* (Karsch, 1893)**

*Gnophodes harpa* Karsch, 1893. *Berliner Entomologische Zeitschrift* 38: 211 (1-266).

Synonym of *Gnophodes chelys* (Fabricius, 1793). Ackery *et al.*, 1995.

*Haydonia harpa* (Karsch, 1893). Pyrcz *et al.*, 2020. **comb. n., stat. reinst.**



*Haydonia harpa*. Male. Left – upperside; right – underside.

Mpanga Forest, Uganda. 11 June 2017. J. Dobson.

Images M.C. Williams ex Dobson Collection.

**Type locality:** Togo: “Bismarkburg [Adele]”.

**Diagnosis:** Both sexes considerably smaller than *H. chelys* and *H. Pythia*; FW inner margin slightly convex, not sigmoid as in other two species; FW outer margin less produced; discal cell proportionally longer to wing length; underside less patterned, predominantly greyish and lustrous; Females with yellowish FW subapical band (Pyrzcz *et al.*, 2020).

**Distribution:** Guinea, Sierra Leone, Liberia, Ivory Coast, Ghana, Togo, Cameroon, Equatorial Guinea, Central African Republic, Angola, Democratic Republic of Congo, Uganda, Tanzania.

**Specific localities:**

Guinea – Localities listed in Pyrcz *et al.*, 2020.

Sierra Leone – Localities listed in Pyrcz *et al.*, 2020.

Liberia – Localities listed in Pyrcz *et al.*, 2020; Wologizi (Safian *et al.*, 2020).

Ivory Coast – Localities listed in Pyrcz *et al.*, 2020.

Ghana – Localities listed in Pyrcz *et al.*, 2020.

Togo – Bismarkburg (Adele) (TL).

Cameroon – Localities listed in Pyrcz *et al.*, 2020.

Democratic Republic of Congo – Localities listed in Pyrcz *et al.*, 2020.

Uganda – Mpanga Forest (Pyrzcz, *et al.*, 2020). Additional localities listed in Pyrcz *et al.*, 2020.

Tanzania – Mpanda to the Ugandan border (Kielland, 1990d). Additional localities listed in Pyrcz *et al.*, 2020.

**Habitat:** Submontane forest, mostly between 600 and 1000 m.

**Habits:** Nothing published.

**Early stages:**

Pyrzcz *et al.*, 2020 [5<sup>th</sup> instar larva].

**Larval food:**

*Setaria* sp. (Poaceae) [Pyrzcz *et al.*, 2020].

*minchini* Heron, 1909 (as sp. of *Gnophodes*). *Transactions of the Zoological Society of London* **19**: 143 (141-178). Uganda: “Entebbe”. Synonymized with *H. harpa* by Pyrcz *et al.*, 2020.

*magniplaga* Heron, 1909 (as f. of *Gnophodes minchini*). *Transactions of the Zoological Society of London* **19**: 144 (141-178). Uganda: “E. Ruwenzori”. Synonymized with *H. harpa* by Pyrcz *et al.*, 2020.

### **\**Haydonia hassoni* Pyrcz & Collins, 2020**

*Haydonia hassoni* Pyrcz & Collins 2020. *Arthropod Systematics & Phylogeny* **78** (2): (171-216).

**Type locality:** Democratic Republic of Congo: Ntumbwa River, Upemba National Park, Katanga. Holotype (male): 3-21 August 2001; M. Hasson and T. Bouyer; in ABRI Collection; ABRI-2018-4877.

**Diagnosis:** Male most closely resembles *H. chelys* but forewing outer margins more produced along vein M1; upperside ground colour lighter brown; underside with intense yellow suffusion, especially on forewing; forewing subapical oblique orange band wider with more diffuse edges (Pyrzcz *et al.*, 2020).

**Distribution:** Democratic Republic of Congo.

**Specific localities:**

Democratic Republic of Congo – Ntumbwa River, Upemba N.P. (TL); Lukima, Upemba N.P. (Pyrzcz *et al.*, 2020).

**Habitat:** Forest at 1600 to 1700 m. (Pyrzcz *et al.*, 2020).

**Habits:** Nothing published.

**Early stages:** Nothing published.

**Larval food:** Nothing published.