The type series of the hawkmoth Clanis hyperion Cadiou & Kitching, 1990 comprised a holotype male and a paratype series of 17 males and six females captured at various locations in northwestern Thailand between 1988 and 1989 (Cadiou & Kitching 1990). Additional non-type materials comprised a further three males and one female from northwestern Thailand and a single male from the Khasi Hills, Assam [Meghalaya], India (Cadiou & Kitching 1990). Clanis hyperion closely resembles Clanis titan Rothschild & Jordan 1903, but the two species can be distinguished by the different extents of the pale apical area of the forewing upperside. In C. titan, this reaches only as far as vein M1, whereas in C. hyperion, the pale area extends beyond vein M2 (Image 1). Some specimens of Clanis undulosa Moore, 1879 can also be similar but this species is easily distinguished from both C. hyperion and C. titan by the presence of a conspicuous black streak on the underside of the forewing near the base; this streak is lacking in both C. hyperion and C. titan. In addition, the uppersides of the tibiae of the mid- and hind legs are pink in C. hyperion but white in C. titan and C. undulosa.

More recently, specimens of C. hyperion have been captured in Laos and southern Myanmar (Burma) (Eitschberger 2004). There is also a single male in the collection of the Natural History Museum, London, UK, from “Xuebangshan, Nanping side” (correctly “Xuebanshan, Nanping side”), Yunnan, China. Nothing is known of the early stages and the habitat of the species, beyond what is indicated on the data labels.

Methods: Mendrelgang is a division of Tsirang Dzongkhag (District) in the south-central region of Bhutan. It is located at approximately 27°02’N & 90°10’E, and covers an area of some 15km² at an altitude between 700–1750 m (Royal Government of Bhutan 2012). The region has a temperate climate with the temperature ranging between 20°C and 35°C. Winter extends from October to March, followed by summer from April to June and monsoon from June to September. The vegetation types found in this region are classified as temperate broadleaf forest at lower elevations and chir pine forest at higher altitudes (National Statistics Bureau 2010).

The collection of moths was undertaken opportunistically, employing no particular methodology. Moths were observed at 20W fluorescent lamps that had been left on overnight in the Mendrelgang Middle Secondary School between December 2011 and September 2012. Specimens were taken in an ethyl acetate collecting jar, pinned and labeled as soon as they were caught, then later sorted and identified to species.
level in the laboratory. These voucher specimens are deposited in the Department of Science Specimen Insect Museum, Mendrelgang Middle Secondary School, Tsirang. Initial identifications were carried out with the help of available literature and identification keys, and internet references. Species that were not identified or were potentially problematic taxonomically were sent to the second author at the Natural History Museum, London, UK, for confirmation.

Results and Discussion: Among the 27 species recorded (Appendix 1), the most notable was a specimen of Clanis hyperion which was attracted to a whitewashed wall at the residence of the first author on 13 May 2012 (Images 2 & 3). Prior to 2012, only a single paratype of this species was known from India, from an unspecified locality in the Khasi Hills of Meghalaya State. The present record extends the known distribution of Clanis hyperion to the eastern Himalaya and more significantly it is the first record from northwest of the Brahmaputra River. It thus represents a significant range extension for the species. Recent studies of Saturniidae (Emperor Silkmoths) in northeastern India and adjacent territories have shown that the Brahmaputra may be a significant barrier, with what was once considered to be a single species actually consisting of two closely related species, one inhabiting either side of the river; e.g., Archaeoattacus edwardsii (White, 1859) and A. malayanus Kurosawa & Kishida, 1994 (Nässig et al. 2010) or Saturnia (Rinaca) zuleika Hope, 1834 and S.(R.) lesoudieri Le Moult, 1933 (Nässig & Naumann, 2010). A similar situation may be true in the case of Clanis hyperion and further studies should be undertaken to determine whether or not the Bhutanese populations are conspecific with those from further east and south.

References


Appendix 1. Annotated checklist of hawkmoths in Mendrelgang, Bhutan

Family: Sphingidae
Subfamily: Sphinginae
1. Acherontia lachesis Fabricius 1798, Greater Deaths’ Head Hawkmoth (18.ix.2012)
3. Apocalypsis velox Butler 1876, Bald Hawkmoth (18.vi.2012)

Subfamily: Smerinthinae
1. Ambulyx ochracea Butler 1885, Ochreous Gliding Hawkmoth (20.iii.2012; commonly seen every month)
2. Ambulyx substrigilis substrigilis Westwood 1848, Dark-Based Gliding Hawkmoth (commonly seen every month)
3. Amylypterus panopus panopus Cramer 1779, Mango Hawkmoth (17.vi.2012)

Subfamily: Macroglossinae
3. Acosmeryx shervillii Boisduval 1875, Dull Forest Hawkmoth (9.ix.2012)
11. Theretra nessus nessus Drury 1773, Yam Hawkmoth (commonly seen every month)
12. Rhagastis castor aurifera Walker 1856, Common Mottled Hawkmoth (22.iii.2012)