ISSN 2230-7052
170
21 March 2019
Bugs R All
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WHITE-STREAKED HAWKMOTH

Report on the range extension of *Clanidopsis exusta* (Butler, 1875) from Bhutan

IUCN Red List:
Not Assessed

An adult *Clanidopsis exusta* (Butler, 1875) in Lungten Zampa Village, Trashigang, Bhutan. Photo credit: K. Jamtsho)

Insecta
[Class of Insects]

Lepidoptera
[Order of insect including butterflies and moths]

Sphingidae
[Family of Moths]

Clanidopsis exusta
[White-streaked Hawkmoth]

Species described by Butler in 1875

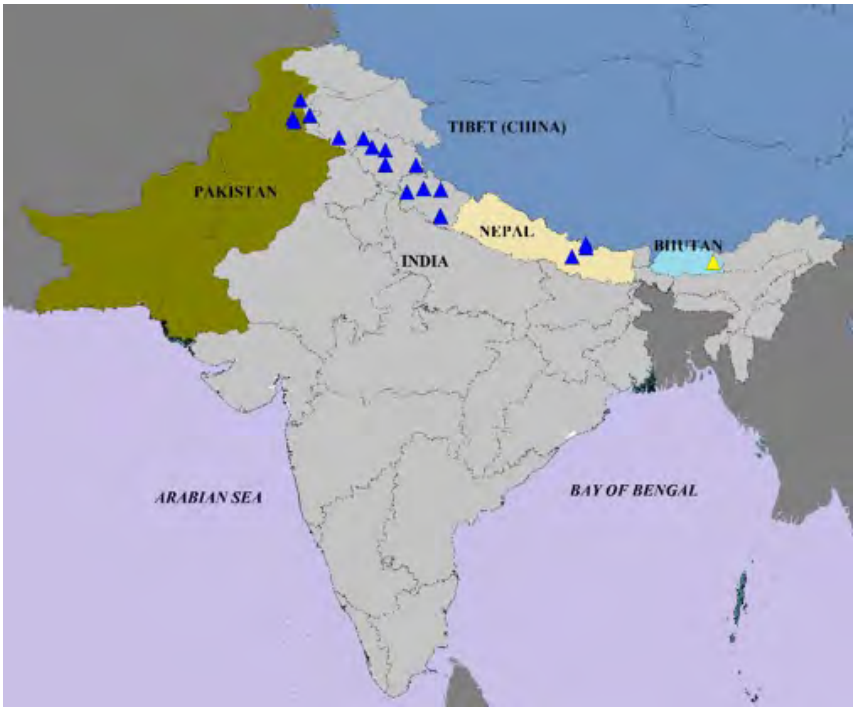
The White-streaked Hawkmoth was described from Kunawur in Himachal Pradesh, India, as *Basiana exusta* Butler, 1875 (Butler 1876). Cotes & Swinhoe (1887) included this species under the genus *Clanis* (Hübner). Later, Hampson (1892) included the species in the genus *Ambulyx* Westwood based on its brief description. Finally, Rothschild & Jordan (1903) revised the species, proposed the new genera *Clanidopsis*, and included the species *Clanidopsis exusta* (Butler, 1875) as the single member of the newly proposed genus. *Clanidopsis* Rothschild & Jordan, 1903 belongs to the subfamily Smerinthinae of the family Sphingidae. It is distributed in the Oriental region and is

ISSN 2230-7052
170
21 March 2019
Bugs R All
Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

monobasic (D'Abrera 1987). The species is known from Pakistan (Rafi et al. 2014; Younus & Kamaluddin 2015), India (Bell & Scott 1937; Bortolin et al. 1998; Smetacek 1994, 2008; Sanyal et al. 2018), central Nepal (Haruta 1992), and Tibet (China) (Pittaway & Kitching 2018) (Table 1).

The adult male of *C. exusta* has a length of about 76–96 mm and a wingspan of 96mm (Bell & Scott 1937) and slightly resembles the species of the genus *Clanis*. On comparison with the latter, however, *Clanidopsis exusta* is characterised by shorter proboscis, broader forewing, tibiae lacking spines, and absence of pulvilli and arolium (present in the species of *Clanis*). The upper side of the forewing is reddish-brown, dorsum of thorax is dark brown, forewing has a pale, irregular, indistinct submarginal band, and hindwing has two indistinct postmedian and prominent submarginal and marginal dark lines (Bell & Scott 1937). The larvae of the species feed on the species of *Indigofera* (Fabaceae) (Bell & Scott 1937), but the caterpillar also feeds on the species of *Populus* (Salicaceae) (D'Abrera 1987).

Global Distribution: Northern Pakistan, Northwestern India, Central Nepal, China (Tibet)



The distribution range of *Clanidopsis exusta* (Butler, 1875). Blue triangles - historical sighting localities, yellow triangle - new record from Lungten Zampa Village in Trashigang, Bhutan (prepared using DIVA-GIS 7.5.0 by J.S. Irungbam).

Sighting of *Clanidopsis exusta* Butler, 1875

The moth was encountered on the night of 11 June 2018 at around 21.44h near a residential colony of Lungten Zampa Village (27.348^{0}N & 91.619^{0}E, 906m) under Samkhar Block, Trashigang District of eastern Bhutan. The vegetation in the neighbourhood is

ISSN 2230-7052
170
21 March 2019
BUGS R AL
Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

Table 1: Sighting locations and distribution range of *Clanidopsis exusta* (Butler, 1875) (based on published literature)

	Location	Latitude	Longitude	Altitude	Reference
1	Lungten Zampa, Samkhar Geog, Trashigang, Bhutan	27.348	91.619	906	Present sighting
2	Kinnaur, Himachal Pradesh, India	31.650	78.475	3538	Type locality
3	Auli Forest, Joshimath, Uttarakhand, India	30.557	79.566	1771	Smetacek 1994
4	Gagar, Uttarakhand, India	29.415	79.544	2181	Smetacek 2008
5	Jones Estate, Uttarakhand, India	29.355	79.543	1420	Smetacek 2008
6	Kothi Guest House, Mandi, Himachal Pradesh, India	32.316	77.116	2521	Bortolin et al. 1998
7	Kara Forest, Mandi, Himachal Pradesh, India	31.683	77.116	1202	Bortolin et al. 1998
8	Bharmour, Chamba, Himachal Pradesh, India	32.442	76.532	2075	Bortolin et al. 1998
9	Bhanjraru, Tissa, Himachal Pradesh, India	32.836	76.150	2000	Bortolin et al. 1998
10	Mussoorie, Uttarakhand, India	30.459	78.066	1987	Bell & Scott 1937
11	Northwestern Himalaya, Jammu & Kashmir, India	32.874	75.056	931	Sanyal et al. 2018
12	Western Himalaya, Uttarakhand, India	30.613	78.809	2934	Sanyal et al. 2018
13	Godavari Valley, Nepal	27.601	85.365	1439	Haruta 1992
14	Zhangmu, Tibet, China	27.987	85.983	2220	Pittaway & Kitching 2000
15	Nyalam, Xigaze, Tibet, China	28.155	85.982	3743	Pittaway & Kitching 2000
16	Kaghan Valley, Khyber Pakhtunkhwa, Pakistan	34.541	73.35	974	Rafi et al. 2014
17	Margala Hills, Islamabad, Pakistan	33.743	73.022	969	Rafi et al. 2014
18	Rawalkot, Pakistan	33.858	73.765	1670	Rafi et al. 2014
19	Ayub National Park, Rawalpindi, Pakistan	33.567	73.083	504	Rafi et al. 2014

dominated by chirpine (*Pinus roxburghii*) forest. The moth was attracted to the fluorescent light of a residential house. The first author captured the image of the moth and, later, the second author identified this species from the available literature (D'Abrera 1987; Haruta 1993; Pittaway & Kitching 2018). The status of a new record and range extension of the species to the country was confirmed by Mr. Peter Smetacek, Butterfly Research Centre, Bhimtal (India), (pers. comm. 12 June 2018).

Earlier studies show that this species of hawkmoth was not recorded from Bhutan. Additionally, while compiling the work on moths of Sikkim and Bhutan, Dudgeon (1901) did not record this species from the Bhutan. The expedition of the Natural History Museum, Basel (Switzerland), in 1972 did not encounter this hawkmoth in Bhutan (Dierl 1975). Recent studies of Irungbam & Kitching (2014) at Tsirang District of southern Bhutan and Gielis & Wangdi (2017) in eastern Bhutan also did not report the species from the country. The species, however, is quite common and frequently encountered in the northwestern and western part of Himalaya. Rafi et al. (2014) reported the presence of this hawkmoth from Kaghan Valley, Margala Hills, Rawalkot, and Ayub National Park of northern Pakistan. Younus & Kamaluddin (2015) also recorded the species from

ISSN 2230-7052
170
21 March 2019
Bugs R All
Newsletter of the
Invertebrate Conservation & Information Network of South Asia (ICINSA)

Khyber Paktunkhwa, Nathia Gali, Donga Gali (Azad Kashmir), and Rawalakot of northern Pakistan. In India, the species is reported from the states of Himachal Pradesh (Bortolin et al. 1998; Sanyal et al. 2018) and Uttarakhand (Smetacek 1994, 2008; Sanyal et al. 2018). In Nepal, the species is reported from the Godavari Valley of central Nepal (Haruta 1992). There, however, are no reports on the presence of the species in the neighbouring Indian states of Sikkim, Arunachal Pradesh, Assam, and West Bengal. Thus, the present sighting of the species in Trashigang District of eastern Bhutan is significant. It gives the first record on the presence of this species from Bhutan and the confirmed report of the species extending its distribution range eastward from its earlier range of distribution. It would be interesting to see the presence of the species in the neighbouring Indian states to check the further movement of the moth eastward.

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ISSN 2230-7052
170
21 March 2019
Bugs R All
Newsletter of the
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