International Journal of
Life Sciences
International Peer Reviewed Open Access Refereed Journal

Int. J. of Life Sciences, 2023; 11 (4): 345-348
ISSN:2320-7817(p) | 2320-964X(o)

Research Report Open Access

Taxonomic status of scheduled species *Saletata liberia* (Cramer, 1779) from great Nicobar Islands (Pieridae : Lepidoptera)

Manpreet Kaur[1], **Avtar Kaur Sidhu**[2]* **and Kirti JS**[1]

[1]Department of Zoology and Environmental Studies, Punjabi University, Patiala (PB), India
[2]Zoological Survey of India, Saproon, SOLAN (HP), India
*Email: avtarkaur2000@gmail.com

Manuscript details:

Received: 26.07.2023
Accepted: 26.11.2023
Published: 31.12.2023

Cite this article as:
Manpreet Kaur, Avtar Kaur Sidhu and Kirti JS (2023) Taxonomic status of scheduled species *Saletata liberia* (Cramer, 1779) from great Nicobar Islands (Pieridae : Lepidoptera), *Int. J. of Life Sciences*, 11 (4): 345-348.

Available online on http://www.ijlsci.in
ISSN: 2320-964X (Online)
ISSN: 2320-7817 (Print)

ABSTRACT

The species *Saletata liberia* (Cramer, 1779), a scheduled species is distributed in Andaman and Nicobar Islands. Previously this species was treated under the genus *Appias* Hunber. The present studies deals with its taxonomy including the details of its male which has been described and illustrated, and difference from genus *Appias* on basis of male genitalia have been discussed.

Keywords: Pieridae, *Saletata liberia*, Great Nicobar, status, male genitalia.

Abbreviations: Sc = Subcosta vein; R_1 = Radius vein 1; R_2 = Radius vein 2; R_3 = Radius vein 3; R_{4+5} = Radius vein 4+5; Rs = Radial sector; M_1 = Median vein 1; M_2 = Median vein 2; M_3 = Median vein 3; Cu_1 = Cubitus vein1; Cu_2 = Cubitus vein 2; 1A+2A = Anal vein 1+2; 3A = Anal vein 3; AED = Aedeagus; TG = Tegumen; UN = Uncus; VLV = Valva; VIN = Vinculum; SA = Saccus; DU.EJ = Ductus ejaculatorious; HRP = Harpe; VES = Vesica; TH.APP = thecal appendage.

INTRODUCTION

The genus *Saletara* was erected by Distant in 1885 on its type species *Pieris nathalia* Felder. This genus is known by four species i.e. *Saletara cycinna* (Hewitson), *Saletara liberia* (Cramer), *Saletara panda* (Godart) and *Saletara gisco* (Grose-Smith) distributed in India, Philippines, New Guinea, Sumatra, Palawan, Java, Malay Peninsula, Borneo, Sumatra, Sulawesi and Bali. From India only *S. liberia* (Cramer) has been reported so far. The present genus *Saletara* Distant has been studied by various workers like Bingham (1907), Klots (1931), Evans (1932), Talbot (1939) and Arora & Nandi (1982) and. Different morphological characters including genitalic attributes and distribution of *Saletara liberia* (Cramer) have been studied and illustrated.

OBSERVATIONS AND DISCUSSION:

Genus *Saletara* Distant, 1885

Saletara Distant, 1885; *Rhopalocera Malayana*: 287
Saletara Winhard, 2000; *Butterflies of the world* **10**: 26.
Saletara Vane-Wright & de Jong, 2003; *Zool. Verh. Leiden* **343**: 110.
Saletara Yata, Chainey & Vane-Wright, 2010; *Syst. Ent.* **35**: 764.

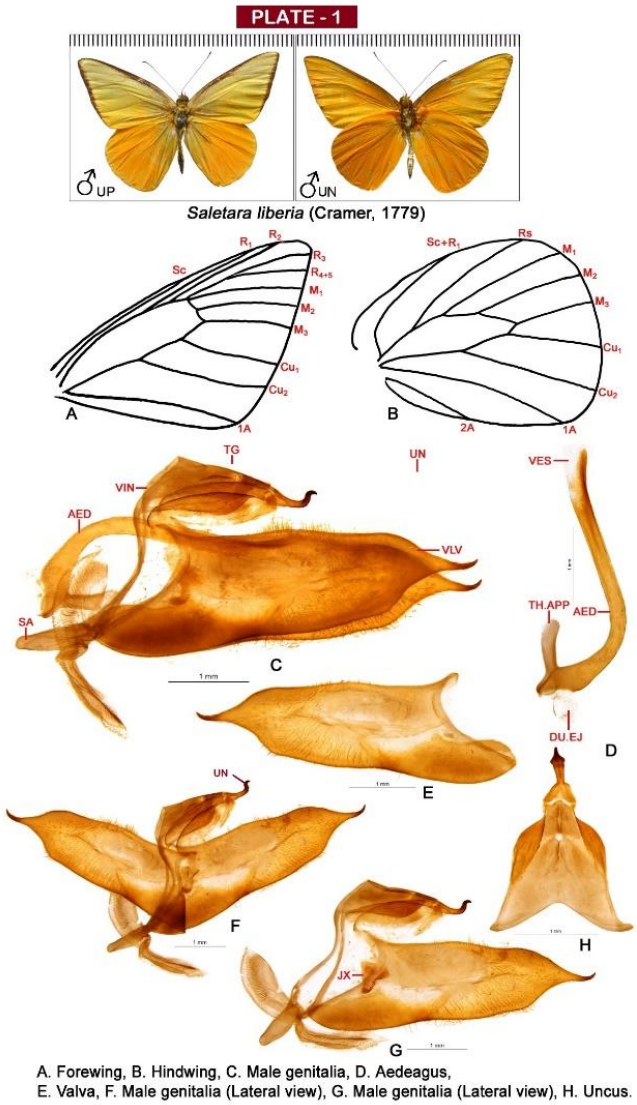
Type species: *Pieris nathalia* Felder, 1862

Pieris nathalia Felder, 1862; *Wien. ent. Monats.* **6** (9): 285.

Diagnosis: Both the wings whitish-yellow with thin black costal and termen margin. Forewing termen and dorsum almost linear. Hindwing rounded.

Distribution: Bali, Borneo, India, Java, Malay Peninsula, Moluccas, New Guinea, Palawan, Philippines, Singapore, Sulawesi, Sumatra, Sumatra.

Figure (Plate-1)



A. Forewing, B. Hindwing, C. Male genitalia, D. Aedeagus,
E. Valva, F. Male genitalia (Lateral view), G. Male genitalia (Lateral view), H. Uncus.

***Saletata liberia* (Cramer, 1779)**

Papilio liberia Cramer, 1779; *Uitl. Kapellen* **3**: 31.
Pieris sulphurea Vollenhoven, 1865; *Faune ent.* **2**: 32.
Saletara liberia Cowan, 1955; *Bull. Raffles Mus.* **25**: 174.

Adult (Male): Forewing dorsal surface yellowish-green; base sprinkled with black scales; costa thin black; apex very little black; termen widely lined with black but not reaching upto tornus; dorsum straight. Ventral side yellowish; base and costa little dusted with black scales. Hindwing dorsal surface sulphur-yellow, inner margin light yellow; base little suffused with blackish scales. Ventral surface cadmium-yellow; termen little paler.
Wing expanse: 40-55mm.

Male Genitalia: Male genitalia very elongated; uncus small, narrow, upturned with apical potion duck shaped; tegumen longer and wider and possess long articulatory processes; vinculum thin, little concave; saccus tubular, distal end blunt, smaller than tegumen; juxta small, V-shaped with sinuous arms; valve extremely long, somewhat quadrate, distal end protrudes to form thin, acuminated extension at the tip curved dorsally; aedeagus longer, strongly arched; thecal appendage long, narrow with blunt tip.

Material examined: ZSI, Kolkata, National Museum Collections.
7♂, ii, Great Nicobar; 1♂, 31.x.1880, Great Nicobar; 1♂, Little Nicobar; 2♂, 29. 2. 1924, Great Nicobar; 1♂, 23.3.1966, Galathea Bay (Great Nicobar).
Distribution in India: Andaman & Nicobar islands.
Global distribution: Bali, Moluccas, Philippines.

Remarks: *Saletara liberia* (Cramer) has been protected under Schedule II of the Wildlife (Protection) Act, 1972. Bingham (1907) compared this species with the representatives of the genus *Appias* Hubner and found morphological resemblances between them. In this present work, the morphological features of *S. liberia* (Cramer) have been compared with the members of the genus *Appias* Hubner. It is observed that in both the sexes of *Saletara liberia* (Cramer), the shape of the wings, antennae, labial palpi, head, thorax and abdomen are similar to the members of *Appias* Hubner. Evans (1932) reported it as very rare under genus *Appias* Hubner as *Appias panda chrysea* Fruhstorfer and devised a key on the basis of its morphological features. Talbot (1939) and Arora & Nandi (1982) reported its male as common and females rare. In this work, the genitalia of *S. liberia* (Cramer) is compared with the illustrations given by Klots (1931). The male genitalia shows remarkable differences from the members of other groups belonging to family Pieridae. The uncus is extremely thin, from lateral perspective the distal end is heavily sclerotized and projected dorsally to form S-shape with pointed tip, in dorsal perspective the uncus is nib-shaped. The valve is extremely long, somewhat quadrate with distal end protrudes to form thin and acuminated extension at the tip which curved dorsally.

Author Info
Orcid ID
Manpreet Kaur: 0009-0007-8695-0101
Avtar Kaur Sidhu: 0000-0003-0302-4158

Conflict of interest: The authors declare that they have no conflict of interest.

REFERENCES

Antram CB (1924) *Butterflies of India*. Thacker, Spink & Co. Calcutta and Shimla, 226pp

Arora GS and Nandi DN (1982). On the butterfly fauna of Andaman and Nicobar Islands (India). *Records of the Zoological Survey of India,* **80**(1): 1-15.

Bingham, CL (1907) *The fauna of British India including Ceylon and Burma* Part II. Taylor and Francis Ltd., London, 453pp.

Bridges CA (1988) *Catalogue of Papilionidae and Pieridae.* Published by the author, Urbana, Ilinois, 1-350.

D'Abrera B (1982) *Butterflies of Oriental Region. Part I: Papilionidae, Pieridae and Danaidae,* Melbourne, 360pp.

Evans WH (1932) *The identification of Indian Butterflies* Part II. The Bombay Natural History Society, Mumbai, India, 454pp.

Klots AB (1931) Generic Revision of the Pieridae, together with a study of the male genitalia. *Entomologica Americana.*, **12**: 139.

Moore F (1882) List of the Lepidoptera collected by the Rev. J. H. Hocking, Chiefly in the Kangra District. *Proceedings of the Zoological Society of London,* **42**: 234-263.

Talbot G (1939) *The fauna of British India including Ceylon and Burma*. Taylor and Francis Ltd., London, **1**: 377.

Wynter-Blyth MA (1957) *Butterflies of the Indian region.* Bombay Natural History Society, Bombay, 523pp.