

Some Records of Skippers (Lepidoptera: Hesperioidea: Hesperidae) from Balochistan Province, Pakistan

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Abstract. Skipper fauna of Balochistan province is not properly studied. To fill this gap, a study was conducted to explore the skipper's fauna from previous literature and new collection from Balochistan, Pakistan. We report 21 species of skippers from two subfamilies, Coeliadinae and Hesperinae. Out of 21 species five species namely *Hesperia comma* (Linnaeus, 1758), *Parnara guttatus* (Bremer and Grey, 1852), *Pyrgus cashmirensis* Moore (1874), *Pyrgus darwazicus* Grun-Grshimailo (1890) and *Pyrgus sidae* (Esper, 1784) under subfamily *Hesperinae* are recorded for the first time from Balochistan. Out of five reported species from Balochistan, two species *Pyrgus darwazicus* and *Pyrgus sidae* are new records for Pakistan.

Keywords: Balochistan, Hesperidae, Lepidoptera, skippers fauna, Pakistan

Introduction

The family Hesperioidea is well-known as the skippers which shares many characteristics with butterflies and moths, particularly during their life cycle from egg to pupa. They are not measured to be "true" butterflies, but are more closely related to the true butterflies than moths (Ackery *et al.*, 1999). The family includes 4000 species throughout the world (Bridges, 1993) in eight subfamilies, namely Euschemoninae, Eudaminae, Heteropterinae, Pyrginae, Hesperinae, Trapezitinae, Megathyminae and Coeliadinae (Ackery *et al.*, 1999), with the highest diversity in central and south America i.e. Neotropical regions (Ackery *et al.*, 1999). However, recently Aqilah *et al.* (2018) reported 265 species from Peninsular Malaysia. Their larvae feed on various host plants of family Poaceae and Fabaceae and about 126 larval host plants have been recorded (NHM, 2019; Tiple *et al.*, 2011).

In Pakistan a small number of studies have been conducted on skippers such as Leslie and Evans (1903) reported kippers from Chitral, while Rhe-Philipe

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(1917) from Lahore (Menesse, 1950) from Sind. Malik (1970) reported from Pakistan. Hasan (1997) from Azad Jammu Kashmir and Gilgit. Roberts (2001) first time reported 41 species from Pakistan. Recently (Mal *et al.*, 2014) documented 11 species from Sindh.

Materials and Methods

This study was conducted to explore the skipper's fauna from Balochistan. The data was assembled from historical literature as well as collected specimens of Hesperids from various localities of Balochistan (mentioned with species). Specimens were caught with the help of butterfly nets. After collection specimens were sorted according to subfamilies level and identified up to the species levels. For confirmation identified specimens were also compared with the help housed specimens of skipper at National Insect Museum, National Agriculture Research Center (NARC), Islamabad.

Results and Discussion

A total of 21 Hesperid's species are reported from Balochistan belonging to two subfamilies i.e. Coelia-

dinae and Hesperinae. Out of one species is reported form subfamily Coeliadinae, while 20 species represented subfamily Hesperinae. Species detail with respective subfamily is given below:

Family: Hesperidae (Latreille, 1809)

Subfamily: Coeliadinae (Evans, 1937)

Genus: *Hasora* Moore (1881)

***Hasora chromus* (Cramer, 1782).**

Remark. Earlier this species was reported from Balochistan: Quetta (Evans, 1933), while Menesse (1950) reported from Sindh, Karachi and from Punjab, Murree (Roberts, 2001). Recently Mal *et al.* (2014) reported from various localities of Sindh.

Subfamily: Hesperinae, 1809

Genus: *Carcharodus* (Hübner, 1819)

***Carcharodus alcea* (Esper, 1780).**

Material examined. Pakistan, Balochistan, Ziarat, 18.08.2003, 1♂, leg., Zubair; Sibi, 15.04.2004, 1♂, leg., Zubair; Quetta: Shahbaz Park, 08-07-2015, 3♀ 2♂, leg., F. Mengal; Hazar Ghanji Chiltan National Park, 28.08.2015, 2♀ leg., F. Mengal; Balochistan Agricultural Research Development Center, 16.08.2015, 3♀ leg., F. Mengal; Allama Iqbal Open University Campus, 04.05.2015, 3, 1♂ leg., F. Mengal.

Remarks. Earlier this species was reported from Balochistan: Ziarat; from Khyber Pakhtunkhwa it reported from Chitral, while from Punjab it was reported from Murree (Roberts, 2001).

***Carcharodus althea* (Esper, 1780).**

Material examined. Pakistan: Balochistan: Ziarat, 18.08.2003, 1♂, leg., Zubair; Quetta, Shahbaz Park, 08.05.2015, 3♂, leg., F. Mengal; Hazar Ghanji Chiltan National Park, 12.07.2015, 2♂, leg., F. Mengal; Balochistan Agricultural Research Development Center, 16.08.2015, 2♂ 2♀, leg., F. Mengal; Allama Iqbal Open University Campus, 24.08.2015, 1♂ 3♀, leg., F. Mengal.

Remarks. Earlier reported from Balochistan: Quetta, Ziarat, Uruk Velly, Hannah Lake and Mastung; from Khyber Pakhtunkhwa it was reported from Chitral (Roberts, 2001).

***Carcharodus dravira* Moore, 1874.**

Remarks. Recently Noor *et al.* (2018) reported this species from Balochistan: Quetta.

Genus: *Cymaenes* (Scudder, 1872)

***Cymaenes trebius* Mabille, 1891.**

Remarks. Recently Noor *et al.* (2018) reported this species from Quetta, Balochistan.

***Cymaenes laureolus* (Schaus, 1913).**

Remarks. Recently Noor *et al.* (2018) reported this species from Quetta, Balochistan.

Genus: *Eogenes*

***Eogenes alcides* (Herrich-Schaffer, 1852).**

Material examined. Pakistan: Balochistan: Ziarat, 18.08.2003, 1♀, leg., Zubair.

Remarks. Earlier reported Roberts (2001) from Balochistan: Ziarat, Uruk Velly.

Genus: *Gegeles* (Hübner, 1819)

***Gegeles nostradamus* Fabricius (1793).**

Material examined. Pakistan: Balochistan: Loralai, 19.06.2007, 1♀, leg., Zubair; Quetta, Shahbaz Park, 15.06.2015, 1♂ 1♀ leg., F. Mengal; Hazar Ghanji Chiltan National Park, 08.05.2015, 2♀, leg., F. Mengal.

Remarks. Earlier reported from Balochistan: Quetta and Peshin; Punjab: Attock; Khyber Pakhtunkhwa: Hazara, Haripur, Kala Pani (Roberts, 2001). Recently this species was reported from Sindh (Mal *et al.*, 2014).

Genus: *Gomalia* (Noore, 1879)

***Gomalia elma* (Trimen, 1862).**

Remarks. Earlier reported from Balochistan: Quetta; Punjab: Rawalpindi and Sindh: Karachi (Roberts, 2001). However, recently this species was reported from Sindh (Mal *et al.*, 2014).

Genus: *Hesperia* (Fabricius, 1793)

***Hesperia comma* (Linnaeus, 1758).**

Material examined. Pakistan: Balochistan: Chaman: Diwana Kot, Park, 15.04.2004, 1♀, leg., Zubair.

Remarks. New record for Balochistan. Earlier reported by Roberts (2001) from Punjab: Chitral; Gilgit Baltistan: Astor and Gilgit.

Genus: *Muschampia* (Tutt, 1906)

***Muschampia staudingeri plurimacula* (Christoph, 1893).**

Material examined. Balochistan: Chaman, Diwana Kot, 15.04.2004, 1♂, leg., Zubair; Loralai, 19.06.2007, 1♀, leg., Ather; Quetta, Shahbaz Park, 01.04.2015, 1♂ 2♀, leg., F. Mengal; Hazar Ghanji Chiltan National Park, 21.04.2015, 1♀, leg., F. Mengal; Balochistan Agricultural Research Development Center, 9.04.2015, 2♀ leg., F. Mengal; Allama Iqbal Open University Campus, 28.04.2015, 3♂ 1♀, leg., F. Mengal.

Remarks. Earlier reported from Balochistan: Loralai, Ziarat (Roberts, 2001).

Genus: *Nisoniades* (Hübner, 1819)

Nisoniades marloyi.

Remarks. Earlier reported from Balochistan: Ziarat, Zhob; Punjab: Chitral and from Khyber Pakhtunkhwa: Waziristan (Roberts, 2001).

Genus: *Parnara* (Moore, 1881).

***Parnara guttatus* (Bemer and Grey, 1852).**

Material examined. Pakistan: Balochistan: Quetta: Hazar Ghanji Chiltan National Park, 08.05.2015, 1♂, leg., F. Mengal.

Remarks. New record for Balochistan: Quetta. Earlier reported from Punjab: Jhelum, Lahore, Rawalpindi, Dunga Gali, Murree; and from Khyber Pakhtunkhwa: Thandiani, Khaira Gali, Khyber Pass, Kohat, Hangu, Abbotabad, Hasan Abdal and Hazara (Roberts, 2001).

Genus: *Pelopidas* Walker, 1870.

***Pelopidas agnaagna* (Moore, 1865).**

Remarks. Recently Noor *et al.* (2018) reported this species from Balochistan: Quetta.

***Pelopidas mathias* (Fabricius, 1798).**

Remarks. Recently Noor *et al.* (2018) reported this species from Balochistan: Quetta. However, earlier reported from Balochistan: Khuzdar; Khyber Pakhtunkhwa: Dera Ismail Khan, Parachinar; Sindh: Hyderabad, Karachi; Punjab: Multan and Lahore (Roberts, 2001). Reported from Sindh (Mal *et al.*, 2014).

Genus: *Pyrgus* Hübner, 1819.

***Pyrgus cashmirensis* Moore (1874).**

Material examined. Pakistan: Balochistan: Pishin: 22.08.2003, 1♀, leg., Ather.

Remarks. New record for Balochistan: Quetta. Already reported from Tajikistan, North Eastern Afghanistan,

Northern Pakistan and Northern India (Moore, 1874).

***Pyrgus darwazicus* Grum-Grshimailo (1890).**

Material examined. Pakistan: Balochistan: Zhob: 12.07.2017, 1♀, leg., M. Irfan.

Remarks. New record for Pakistan. Already reported from North Eastern Afghanistan (Grum-Grshimailo, 1890).

***Pyrgus sidae* (Esper, 1784).**

Material examined. Pakistan: Balochistan: Zhob: 12.07.2017, 1♂, leg., M. Irfan.

Remarks. New record for Pakistan. Already reported from Asia Minor, Iran, Afghanistan (Esper 1783-1784).

Genus: *Spialia* Swinhoe, 1912.

***Spialia geron* (Watson, 1893).** **Remarks.** Earlier reported from Balochistan: Hab river; Sindh: Karachi; Punjab: Attock (Roberts, 2001). Recently this species was reported from Sindh (Mal *et al.*, 2014).

***Spialia phlomidis* (Herrich-Schaffer, 1845).**

Material examined. Pakistan: Balochistan: Loralai, 19.06.2007, 1♀, leg., Ather; Quetta, Shahbaz Park, 04.05.2015, 3♂, leg., F. Mengal; Hazar Ghanji Chiltan National Park, 21.04.2015, 1♀, leg., F. Mengal.

Remarks. Earlier this species was reported from Balochistan: Quetta, Ziarat, Kalat, Uruk Valley and Loralai (Roberts, 2001).

***Spialia sertorius* (Hoffmannsegg, 1804).**

Material examined. Pakistan: Balochistan: Quetta, Shahbaz Park, 17.04.2015, 5 adult leg, Fariha Mengal; Hazar Ghanji Chiltan National Park, 6.05.2015, 4 adult leg., F. Mengal; Balochistan Agricultural Research Development Center; 24.04.2015, 2♀, leg., F. Mengal; Allama Iqbal Open University Campus, 30.05.2015, 1♂ 1♀, leg., F. Mengal.

Remarks. Earlier reported from Balochistan: Ziarat, Shandur, Yasin, Uruk Valley, while from Khyber Pakhtunkhwa: Chitral and from Gilgit Baltistan: Gilgit (Roberts, 2001).

Conflict of Interest. The authors declare no conflict of interest.

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