

XXII BUTTERFLIES OF THE GENUS
PARNASSIUS
IN THE COLLECTION OF THE INDIAN
MUSEUM

By ANDRÉ AVINOFF, F.E.S.

In the summer of 1912 I made a journey by way of Kashmir, Ladak, the Karakorum and Chinese Turkestan from India to Russia for the purpose of lepidopterological investigations. On my way through Calcutta I received the kind permission of Dr. Annandale to look through the collection of butterflies in the Indian Museum. I was very sorry not to be able to spend more time in studying these precious documents; for I had just time to gain an idea of the great scientific value of the material present in the collection, which contains the types of Lionel de Nicéville and other entomologists.

In the following paper I give a list of the forms of the genus *Parnassius* preserved in the collection of the Museum. The order adopted seems to show the natural gradation of the development of the *Parnassius* type, connecting it systematically with *Doritis*, a genus which links *Parnassius* with the other Papilionidae.

1. *Parnassius charltonius*, Gray.

Tehri Garhwal; Kulu Kharbu, 13,000 feet; Kokser, Lahaul, 22-vii; Nila Valley, Kutie Pass, Ladak, ix.

The specimens from these localities seem to belong to the typical form, though strictly the real *charltonius* was described from Chinese Tartary (from some place in Tibet near the frontier of Ladak). They are of rather small size and have the red ocelli reduced.

I found this form at Rupshu, Sumkil, at 16,000 feet (18-vii) and the Shera-la Pass in Ladak.

var. *deckerti*, Verity.

Northern side of Darkot Pass, ca. 12,000 feet; 15-vii-95 (A. W. Alcock): quite typical. Shundar, Chitral; 1-viii.

Shera-la specimens are transitional.

var. *princeps*, Gr. Gr.

Turkestan. Probably from Trans-Alai or Alai, as this is the locality in which the form was found by Grum in 1884 and caught by me in 1908.

2. *Parnassius imperator*, Oberth.

Ta-Tsien-lou. From Ch. Oberthür's collection.

var. *angustus*, Frust.

Kamba-jong, Tibet; vii-1903.

The specimens in my own collection also came from Kamba-jong.

3. *Parnassius delphius*, Ev., var. *fuldussica*, Verity.

Tian-Chian, Fuldus, 9000 feet; vii-1879, caught by S. Alpheraky.

var. *staudingeri*, Bang-Hass.

Hissar Mountains.

var. *chitralica*, Verity.

Shundar, Chitral, 10-viii. Very few examples of this form are known. There are two in the British Museum and four in my own collection. Localities:—Kila-drosh, Shundar, Baroghil.

var. *stoliczkanus*, Moore.

W Tibet, Rupshu, Lachu Ling Pass, 16,000 feet; vii.

Bara Lacha Pass, N. of Lahoul, 16,000 feet; 18-iv-79.

The specimens in my collection come from Rupshu, Sumkil and Tagalang-la, ca. 17,000 feet; vii.

4. *Parnassius hardwickii*, Gray.

This very variable species has different geographical and seasonal forms. Some of the specimens in the Indian Museum are as dark as ab. *charino*, Kirby, and some as pale as ab. *otos*, Frust.

Punjab: Sutlej Valley, 10,000 feet; viii. Kulu. Lahoul. Pangi, 10,000 to 13,000 feet; vii (light form = *otos*, Frust.). Kangra, Jalauri (pale form).

Tibet: Nila (an aberration with the red ocelli of the upper and lower wings absent). Phari-jong; viii-ix (pale form). Chumbi (pale and dark forms).

Sikkim: Gnatong (dark form).

The last form represents the typical *charino*, Kirby.

5. *Parnassius acco*, Gray.

Tibet near Sulphur Springs; 10-vii-96.

This butterfly is represented in very few collections. I have it from Kangma (Tibet), S. W. Tibet, Shera-la in Ladak, Rupshu, Tagalang-la and Sumkil. The specimens in the British Museum come from S. W. Tibet; Tibet lat. 34° 47' 10" N., long. 81° 40'

20" E.; Lupsang; Karakorum and Chumbi. M. Ch. Oberthür and the Hon. W. Rothschild have it from S. Tibet near the Sikkim Boundary.

6. *Parnassius szechenyi*, Friv.

Kuku-nor.

var. *germanae*, Aust.

Ta-Tsien-lou.

7. *Parnassius tenedius*, Ev.

Siberia (probably Altai Mts.).

8. *Parnassius honrathi*, Stgr.

Bokhara.

Known in other collections from Hissar Mts., Gharm in Bokhara, Chorog in the Pamirs, etc.

9. *Parnassius apollonius*, Ev.

Kuldja.

10. *Parnassius apollo*, L., var. *pyrenaicus*, Harc.

Pyrenees.

var. *geminus*, Stich.

Alps.

var. *alpherakyi*, Krulik.

Altai.

var. *sibirica*, Nordm.

Tian-Chian.

Not *hesebolus*, as on the label.

var. *chryseis*, Oberth.

Syr-Darja.

This locality indicates not the river Syr-Darja but the province. The specimen comes very probably from some place near Issyk-kul (lake) in the Alexander mountains.

11. *Parnassius nomion*, Fisch.-Wald.

Siberia (some locality in the Altai).

var. *nomius*, Gr. Gr.

Kuku-nor.

12. *Parnassius delius*, Esp.

Alps.

var. *intermedius*, Men.

(=*altaica*, Men., =*phoebus*, Fab.)

Altai.

var. *smintheus*, Doubl.

Colorado.

13. *Parnassius discobolus*, Alph. (Stgr.).

Tian-Chian.

var. *insignis*, Stgr.

Shundar. The only two other known specimens of *discobolus* from British limits are in my collection (also from Shundar, Chitral).

Another *insignis* in the Museum has the label Kuku-nor, which is sure to be wrong.

var. *romanovi*, Gr. Gr.

Pamir (most probably from Trans-Alai).

14. *Parnassius thibetanus*, Ober.

Ta-Tsien-lou.

15. *Parnassius mercurius*, Gr. Gr.

Kuku-nor (not Pamir, as written on the label).

16. *Parnassius actius*, Ev.

Kisil Art, 14,000 feet.

17. *Parnassius himalayensis*, Elwes.

(=*jacquemontii*, Boisd.)

Garhwal: Phulaldaru, viii. Tehri Garhwal, vii. Nilung Pass, 15,000 feet, vii. Kulu.

Punjab: Kailang, Lahoul; 20-vii-79.

Ladak: Chang-la, 4000 feet.

Chitral, 12,000 feet.

Badakshan.

The last locality is especially interesting, as so little is known of the fauna of Afghanistan.

18. *Parnassius rhodius*, Honr., var. *variabilis*, Stich.

Djirg-thal (Alai Mts.).

var. *chitralensis*, Verity.

Shundar, 1—10-viii; Darkot, 15-vii-95.

19. *Parnassius epaphus*, Boisd.

Tibet near Sulphur Springs, 17,600 feet; vii-96 (rather small, like my specimen from Rupshu).

N. of Chang-la (not *P. jacquemonti* as marked on the label).

var. *cachemiriensis*, Ober.

Kashmir: Deosai Plains; 13,000 feet, 12-viii.

Baltistan: Scoro-la; 15,000 ft., 3-viii.

var. *sikkimensis*, Elwes.

Sikkim: Lachen to Lachung 12,000-18,000 feet.

Tibet: Phari Jong.

var. *poeta*, Ober.

Ta-Tsien-lou.

20. *Parnassius orleans*, Ober.

Ta-Tsien-lou.

var. *groumi*, Ober.

Kuku-nor.

Not the typical *orleans* as on the label.

21. *Parnassius eversmanni*, Men.

N. Siberia: Lena; 20-vi.

22. *Parnassius clarius*, Ev.

Altai.

ab. *dentata*, Aust.

Altai.

23. *Parnassius nordmanni*, Men., var. *minima*, Honr.

Caucasus: Dagestan.

24. *Parnassius mnemosyne*, L.

Scandinavia; S. W. Russia.

25. *Parnassius stubbendorffii*, Men.

Probably Altai.

var. *tartarus*, Aust.

Kuku-nor.

var. *koreana*, Verity.

Korea.

var. *citrinarius*, Motsch.

Japan.