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Additional notes on the *Aulocera pumilus* (C. & R. Felder, 1867)-group

(Lepidoptera, Nymphalidae, Satyrinae)

by

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Abstract: The classification of the *Aulocera pumilus* (C. Felder &. R. Felder, 1867)-group is discussed again, and four species complexes are recognised in this Palaearctic Asian group as following: the *Pygmaea* Holik, 1949-complex, the *Pumilus* C. &. R. Feld.-complex, the *Palaearcticus* Staudinger, 1889-complex and the *Sikkimensis* Stdg., 1889-complex. A tentative checklist of the species group is given.

Materials: specimens examined in this study are deposited in the following public and private collections, Chongqing Museum of Natural History, Beibei, CHINA (CMNH), Shihezi University, Shihezi, CHINA (SHZU), Museum für Tierkunde, Dresden, GERMANY (MTDG), Zoologische Forschungsinstitut und Museum Alexander Koenig, Bonn, GERMANY (ZFMK), Zoological Institute, Russian Academy of Sciences, St.-Peterburg, RUSSIA (ZISP), Zoologisches Museum, Humboldt Universität, Berlin, GERMANY (ZMHU), Zoological Museum, Kyiv National Shevchenko University, Kyiv, UKRAINE (ZMKU), Dr. S. Y. Lang's private collection, Beibei, CHINA (LSY), Mr. H. Huang's private collection, Qingdao, CHINA (HH), Mr. M. Kalabza's private collection, Pardubice, CZECHIA (MK) and Mr. V. V. Tshikolovets's private collection, Pardubice, CZECHIA (VVT). Photos taken from MTDG, ZISP, ZMHU, ZMKU, MK, VVT were provided by V. V. Tshikolovets (Pardubice), photos taken from ZFMK were provided by S. Y. Huang (Bonn), and photos taken from HH were provided by H. Huang (Qingdao).

The *Aulocera pumilus* (C. &. R. Felder, 1867)-group (= *Paroeneis* Moore, 1893) (Satyrini: Satyrina) has been studied and repeatedly discussed by the senior author and his colleague recently (Lang, 2019, 2021, 2022; Lang & Huang, 2023). In the past summer (5.VIII.2023), the second author collected 1 ♂, 3 ♀♀ of *Aulocera palaearcticus* (Staudinger, 1889) (figs. 1e, 4B2, 5B3-5) from the north slope of the West Altun Shan range in Qira (3430 m), S. Xinjiang, and this site rightly falls into the scope of the possible type locality of *Oeneis pumilus* var. *lama* Alphéraky, 1889, which is a junior synonym of *Aulocera palaearcticus* (Stdg.), deduced by Lang (2019). According to Bretschneider (1898), Przewalsky's expedition team left Keria (Keriya or Yutian) on June 10 [1885] and travelled along a road touching the north slope of Kuen lun (Kun Lun) and arrived Chira (Qira or Cele) on Aug. 2 [1885]. Therefore, the typical materials of the taxon *lama* Alph. was collected from the southern mountain between Keriya (Yutian) and Qira (Cele) (Lang, 2019). Accurately, this mountain is not "the north slope of Kun-Lun (Kuen lun)", but exactly it should be the north slope of the Altun Shan (Altyn tagh), which is closely located to the north of the Kun Lun in Qira. From a very near west point (south of Hotan) of this site in Qira, the West Kun Lun is separated into two roughly eastwards ranges respectively as the Altun Shan (Altyn-Tagh) in the north and the main Kun Lun (Central Kun Lun) in the south. So, the type locality of the taxon *lama* Alph. is nearly at the west end of the Altun Shan, and the westernmost record of *Aulocera iole nanschanica* (Grum-Grshimaïlo, 1902) had been collected from the Dangjin Pass (Lang, 2021), which is the east end of the Altun Shan. These two sites on the two ends of the Altun Shan are about 1200 km in distance, and between them, no reliable record of the *Pumilus* (C. &. R. Feld.)-group has been reported until now. It is possible that along an altitude belt about 3500 m on the north slope of the Altun Shan, which simultaneously presents as the southern border of the Tarim Basin and the northern border of the Tibetan Plateau, a joined population between *Aulocera palaearcticus* (Stdg.) (= *lama* Alph., *divnogorski* B.-H.) and *A. iole nanschanica* (Gr.-Gr.) might be existent and even at least one undescribed taxon between them will be expected. On the other hand, even though the distance between *A. palaearcticus* (Stdg.) from Xinjiang and *A. pumilus* (C. &. R. Feld.) from W. Tibet and Kashmir is comparatively very short, it is possible that their genetic exchanges have been totally blocked by the Karakoram and its surrounding highlands. The fact is that, morphologically, *A. palaearcticus* (Stdg.) and *A. pumilus* (C. &. R. Feld.) are nearly two extremes in this species group. Accordingly, *A. palaearcticus* (Stdg.) was largely possibly a dispersal result from *A. iole* (Leech, 1892) which dominates the East Tibetan Plateau, and the north slope of the Altun Shan is acted as a corridor which connects the two species. However, it is also possible that *A. palaearcticus* (Stdg.) and *A. iole* (Leech) are conspecific and their transition are gradual alongside the Altun Shan. The present distributional map (Fig. 3) displays that the *Pumilus* C. &. R. Feld.-group has a circum-Tibetan distributional pattern. But also possibly, it might have a pan-Tibetan distributional pattern, and its range may also include the North Tibetan Plateau, viz. the Qangtang Plateau, needs further investigations. A belt area inculding the intermountainous corridor between the Karakoram and the West Kun Lun, and the Pamir and the Aksai Chin on the two sides of the corridor is likely to be a vacant zone for the species group. The butterfly fauna of the Pamir Plateau has been well investigated, and no member of the species group was exactly recorded from its core area before, excepting the north slope of the West Kun Lun which is the northernmost fringe of the Pamir (Tshikolovets, 1997, 2003). The Aksai Chin is a high-altitude arid region, and the species group might be also absent here (the Lanak Pass, type locality of *Chionobas pumilus* C. &. R. Feld., is separated from the south fringe of the Aksai Chin by a watershed). It is highly possible that the isolated belt, which is along the north slope of the giant Karakoram, has thoroughly broken the loop of the species group and causes the large differences between *Aulocera palaearcticus* (Stdg.) and *A. pumilus* (C. &. R. Feld.). Furthermore, the huge east-west oriented ridge, Kun Lun, also possibly acts as a fierce barrier which blocks the north-south communication in the species group in the western half of the Tibetan Plateau. In the eastern and southern parts of the Tibetan Plateau, including mountains of the Hengduan Shan and the Himalayas, the specific and subspecific diversity of the species group is relatively high. Especially, the vast Hengduan Shan should be the common cradle of the *Pumilus* (C. &. R. Feld.)-group and its sibling clade, viz. the *Aulocera sybillina* (Oberthür, 1890)-group which includes *A. sybillina* (Obth., 1890) and *A. longanfua* Lang, 2021.

Morphologically, four species complexes are proposed in the *Pumilus* C. &. R. Feld.-group as following (Fig. 2): the *Pygmaea* Holik-complex, the *Pumilus* C. &. R. Feld.-complex, the *Palaearcticus* Stdg.-complex and the *Sikkimensis* Stdg.-complex. Each species complex is composed of one species or several allopatric species, and moreover, each complex may actually be a single species (with its subspecies) or a superspecies (with its semispecies).

1) The *Pygmaea* Holik-complex with four species is known from the easternmost and southeasternmost fringes of the Tibetan Plateau, and based upon currently available data, its range seems to be divided into two parts by the range of *Aulocera iole* (Leech). But it is also possible that a mountainous chain along the eastern outer rim of the Huangduan Shan can connect the two parts. Taxa of this species complex had already been discussed by Lang & Huang (2023) in detail.

2) The *Pumilus* C. &. R. Feld.-complex is a monotypical complex with only *Aulocera pumilus* (C. &. R. Feld.) from Kashimir and W. Tibet. Its smaller valva with reduced upper and ventral lobes is unique in the species group. Considering that its range is located at a remote corner of the kingdom of the species group, so, it should be a result of vicariance which is totally different from the dispersal result of *A. palaearcticus* (Stdg.) at another corner as mentioned above.

3) The *Palaearcticus* Stdg.-complex consists of the following species: *Aulocera iole* (Leech) from the whole eastern part of the Tibetan Plateau from the Qilian Shan (W. Gansu) southwards to the Hengduan Shan (W. Sichuan); *A. palaearcticus* (Stdg.) from the western rim of the Tarim Basin including the north slopes of the Altun Shan and the West Kunlun, and the South Tian Shan; *A. parapumilus* (Huang, 2001) from the East Himalayan region; and *A. grandis* (Riley, 1923) from the central Himalayas. Though basic colors vary from vivid orange to dark brown in its different subordinate taxa, this species complex is also possibly only a sole species itself.

4) The *Sikkimensis* Stdg.-complex is known from the central Himalayas, and it is another monotypical species complex in the group. Superficially, it seems that it is intermediate between the *Pumilus* C. &. R. Feld.-complex and the *Palaearcticus* Stdg.-complex. When described the taxon *sikkimensis* Stdg., Staudinger (1889) wrote that it was based upon 4 ♂♂. Tshikolovets (pers. comm.) provided the senior author photographs of three ♂ syntypes kept in ZMHU, and their labels are as follows: the first syntype with "Origin./ *Palaearcticus* Stgr. v. *Sikkimensis* stgr./ Chumbi Tibet. 82" (Fig. 1a1), the second syntype with "Origin/ Chumbi Tibet. 82" (Fig. 1a2) and the third syntype with "Origin/ Sikkim 1881" (Fig. 1a3). Accordingly, the taxon *sikkimensis* Stdg. was described on specimens from both Sikkim and Chumbi valley (Tibet) (the two are close and narrowly separated by the Dongkya ridge). Coincidentally, the taxon *bicolor* Seitz was also described from Chumbi valley (Thibet) (Seitz, 1908) (figs. 1b, 4M). The forewing upperside of the first ♂ syntype of *sikkimensis* Stdg. (Fig. 1a1) is ochreous red inside the postdiscal spots, and it means that this syntype is somewhat similar to the description of the taxon *bicolor* Seitz (Seitz, 1908). Meanwhile, the third ♂ syntype of *sikkimensis* Stdg. (Fig. 1a3) is brighter and larger, and it even looks like an *Aulocera grandis* (Riley). The ideal and standard model of the taxon *sikkimensis* Stdg. was figured by Elwes (1882: pl. 25: f. 3) (Fig. 1a4), which was quoted by Staudinger (1889) in his original description (Talbot, 1949) and is fit for the second ♂ syntype (figs. 1a2, 4L1). So, when a future scholar will designate the lectotype of the taxon *sikkimensis* Stdg., this problem must be considered seriously. As its name meaning with two colors, typical *A. bicolor* (Seitz, 1908) can be easily separated from the unicolored classic *A. sikkimensis* (Stdg.), but in a long series, it is hard to separate them off (Riley, 1923). Additionally, the color pattern of the typical *A. bicolor* (Seitz) is very close to that of *A. grandis* (Riley) from the same region. Therefore, the so called "*bicolor* Seitz" is not only possibly a hybrid of *A. sikkimensis* (Stdg.) and *A. grandis* (Riley), but is also possibly a variation of either two involved species. For instance, Gross (1958) treated "*bicolor* Seitz" as a form of "*sikkimensis* Stdg.". Because the HT (or the lectotype waiting for a designation) of "*bicolor* Seitz" might belong to any possibility proposed above, a final conclusion for this taxon can hardly be given without a study on its typical material. Most likely, "*bicolor* Seitz" is a junior synonym of *A. sikkimensis* (Stdg.), because of that *A. grandis* (Riley) has not been recorded from both Sikkim and Chumbi (Tibet) until now. Nonetheless, considering "*grandis* Riley" is a name younger than "*bicolor* Seitz", the true identity of "*bicolor* Seitz" might also effect the validity of *A. grandis* (Riley). Thus, in this paper, "*A. bicolor* (Seitz)" (Fig. 1b) is temporarily treated as a taxon with its uncertain status (stat. incert.). The reason why we presumably deny that "*bicolor* Seitz" represents an independent species is as follow: Basing upon the current knowledges, "*bicolor* Seitz" might belong to either the *Sikkimensis* Stdg.-complex or the *Palaearcticus* Stdg.-complex, and it is sympatric with members of both the two species complexes, viz. *A. sikkimensis* (Stdg.) and *A. grandis* (Riley), in the C. Himalayas. In our opinion, a necessary condition for a species complex here is that it must be composed of allopatric species (taxa), namely, two complexes in a same region could only comprise two species but not three. So, if *A. sikkimensis* (Stdg.) and *A. grandis* (Riley) are two distinct species, "*bicolor* Seitz" can only be a non existent species.

The sympatric records in the *Pumilus* C. &. R. Feld.-group have been rarely reported, and all known cases are mentioned below. One reason to study the sympatric pattern is to reasonably identify different species complexes in the group. In other words, in this research, it is believed that in each given species complex, no two of its species would be sympatric.

1) At the Demula Pass in the Boshula Ling range, E. Tibet, *Aulocera melanoleuca* Sakai, Aoki & Yamaguchi, 2001 and *A. parapumilus* (Huang) are fly together (Huang, 2001; Lang & Huang, 2023), and they are respectively members of the *Pygmaea* Holik-complex and the *Palaearcticus* Stdg.-complex.
2) At the Mila Pass, east of Lhasa, west of Demula, E. Tibet, *Aulocera parapumilus mila* Lang, 2019 (figs. 1d, 4J) and *A. bicolor* (Seitz) (figs. 1a5, 4L3) are fly together (Lang, 2019). Here, the "*bicolor*" is fit for the *Sikkimensis* Stdg.-complex, and it could be an undescribed subspecies of *A. sikkimensis* (Stdg.). So, the *Palaearcticus* Stdg.-complex and the *Sikkimensis* Stdg.-complex are sympatric at Mila.
3) At the Kharta valley, on the east slope of the Qomolangma (Mt. Everest) [Riley (1923) wrongly wrote as "Kharta, W. of Mt. Everest"], Riley (1923) recorded three species simultaneously in different altitude as *Aulocera grandis* (Riley) at 12000 ft. (ca. 3658 m), *A. bicolor* (Seitz) at 13000-14000 ft. (ca. 3962-4267 m) and *A. sikkimensis* (Stdg.) at 16000-17000 ft. (ca. 4877-5181 m). Riley also mentioned that *A. bicolor* (Seitz) is more similar to *A. sikkimensis* (Stdg.) and "extremely difficult, in a long series, to separate them off". As mentioned above, *A. bicolor* (Seitz) might be a transitional form between *A. sikkimensis* (Stdg.) and *A. grandis* (Riley), and its name-bearing type might be a hybrid or an extreme individual variation of a given species. But it can be confirmed that the *Palaearcticus* Stdg.-complex and the *Sikkimensis* Stdg.-complex are sympatric at the C. Himalayas.
4) It should be mentioned that *Aulocera pygmaea vadimi* Lang, 2019, a member of the *Pygmaea* Holik-complex, and *A. longanfua* Lang are fly together at the Huangtuliang Pass, Pingwu, N. Sichuan. The latter is the closest relative of the *Pumilus* C. &. R. Feld.-group and it is also the sibling of *A. sybillina* (Obth.) (Lang & Huang, 2023).

Certainly, in the above mentioned the case 2 at Mila, an extreme situation is also possible. It is that only a sole species is present at Mila and the so called two different species are conspecific variations in the *Palaearcticus* Stdg.-complex. If so, two possibilities are arose correspondingly in the case 3 at Kharta: A) all three taxa are conspecific too, and in this situation, the *Sikkimensis* Stdg.-complex would be nonexistent. Then, according to the Priority, the senior synonym, viz. *sikkimensis* Stdg., should replace *Aulocera grandis* (Riley) and become a member of the *Palaearcticus* Stdg.-complex; B) there are still two species, and *A. sikkimensis* (Stdg.) belongs to the *Palaearcticus* Stdg.-complex. Then the *Sikkimensis* Stdg.-complex vanishes too, and meanwhile, *A. grandis* (Riley) is a species in its own species complex. The reason to raise such suspicions is because of that the differences between the *Sikkimensis* Stdg.-complex and the *Palaearcticus* Stdg.-complex are indeed trivial.

A checklist of the *Pumilus* C. &. R. Felder-group:

the *Pumilus* C. &. R. Felder-group (= *Paroeneis* Moore, 1893)

I. the *Pygmaea* Holik-complex

Aulocera pygmaea (Holik, 1949)
Aulocera pygmaea pygmaea (Holik, 1949)
Aulocera pygmaea vadimi Lang, 2019
Aulocera atuntsensis (Gross, 1959)
Aulocera auloceroides (Huang, 1999)
Aulocera melanoleuca Sakai, Aoki & Yamaguchi, 2001

II. the *Pumilus* C. &. R. Felder-complex

Aulocera pumilus (C. &. R. Felder, 1867)

III. the *Palaearcticus* Staudinger-complex

Aulocera palaearcticus (Staudinger, 1889) (= *lama* Alphéraky, 1889, *divnogorski* O. Bang-Haas, 1927)
Aulocera iole (Leech, 1892)
Aulocera iole iole (Leech, 1892)
Aulocera iole buddha (O. Bang-Haas, 1927)
Aulocera iole nanschanica (Grum-Grshimaïlo, 1902) (= *illustris* O. Bang-Haas, 1927)
Aulocera iole qiliana Lang, 2019
Aulocera iole kukunoora Lang, 2021
Aulocera iole songi Lang, 2019
Aulocera parapumilus (Huang, 2001)
Aulocera parapumilus parapumilus (Huang, 2001)
Aulocera parapumilus mila Lang, 2019
Aulocera grandis (Riley, 1923)

IV. the *Sikkimensis* Staudinger-complex

Aulocera sikkimensis (Staudinger, 1889)

V. taxon with status incert.

Aulocera bicolor (Seitz, 1908)

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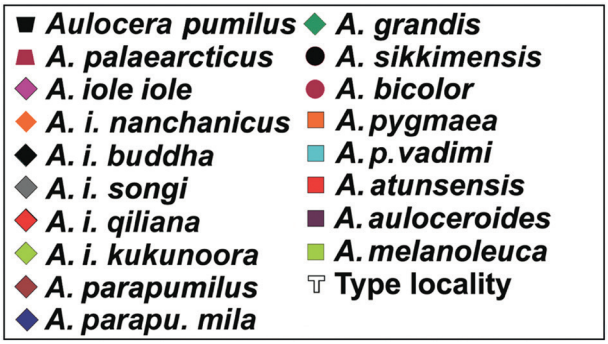


Legends in Fig. 2-5.

Serial numbers in Fig. 4-5: **A.** *Aulocera pumilus* (C. &. R. Felder, 1867): (A1) ♂, Thibet occ., Rudok, ZISP; (A2) ♀, ditto, ZISP; (A3) ♂, Kaschmir sept. or., Marsimik Pass, ZFMK; (A4) ♀, Kaschmir, Shigar River, ZFMK. **B.** *Aulocera palaearcticus* (Staudinger, 1889): (B1) ♂, [Xinjiang], Ak-su, ZMKU; (B2) ♂, Xinjiang, Qira, SATY1266, ANDR0320, LSY; (B3-5) ♀, ditto, LSY, SHZU. **C.** *Aulocera iole iole* (Leech, 1892): (C1) ♂, Sichuan, Kangding, SATY0041, ANDR0138, LSY; (C2) ♀, ditto, SATY0778, LSY. **D.** *Aulocera iole buddha* O. Bang-Haas, 1927: (D1) ♂, Sichuan, Lixian, SATY0751, ANDR0139, LSY; (D2) ♂, Sichuan, Zoige, SATY0750, ANDR0140, LSY; (D3) ♂, Qinghai, Tongren, ANDR0205, LSY; (D4-5) ♀, ditto, LSY. **E.** *Aulocera iole nanschanica* Grum-Grshimaïlo, 1902: (E1) ♂, Gansu, Aksay, LSY; (E2) ♂, ditto, SATY0881, ANDR0204, LSY; (E3) ♂, ditto, SATY0880, ANDR0203, LSY; (E4-6) ♀, ditto, LSY; (E7) ♂, Qinghai, Delhi, LSY; (E8) ♂, ditto, SATY0895, ANDR0214, LSY; (E9-10) ♂, ditto, LSY; (E11) ♂, Qinghai, Ulan, LSY; (E12) ♂, ditto, ANDR0217, LSY; (E13) ♂, ditto, LSY; (E14) ♂, ditto, ANDR0221, LSY; (E15) ♂, ditto, ANDR0220, LSY; (E16) ♂, ditto, ANDR0219, LSY; (E17) ♂, ditto, LSY; (E18) ♂, ditto, SATY0897, ANDR0216, LSY; (E19-22) ♀, ditto, LSY. **F.** *Aulocera iole qiliana* Lang, 2019: (F1) HT ♂, Qinghai, Qilian, SATY0761, CMNH; (F2) PT ♂, ditto, SATY0752, LSY; (F3) PT ♂, ditto, SATY0772, LSY; (F4-5) PT ♂, ditto, LSY; (F6) PT ♂, ditto, SATY0773, ANDR0132, LSY; (F7-9) ♀, Qinghai, Qilian, LSY. **G.** *Aulocera iole kukunoora* Lang, 2021: (G1) HT ♂, Qinghai, Tianjun, SATY0883, ANDR0206, CMNH; (G2) PT ♂, ditto, SATY0884, ANDR0207, LSY; (G3-5) PT ♂, ditto, LSY; (G6) PT ♂, ditto, SATY0885, ANDR0208, LSY; (G7) PT ♂, ditto, LSY; (G8) PTn ♀, ditto, LSY. **H.** *Aulocera iole songi* Lang, 2019, HT ♂, Qinghai, Gyegu, SATY0753, ANDR0137, CMNH. **I.** *Aulocera parapumilus parapumilus* (Huang, 2001): (I1) ♂, Tibet, Baxoi, SATY0757, ANDR0136, LSY; (I2) ♂, ditto, SATY0756, ANDR0135, LSY; (I3) ♀, ditto, SATY0779, LSY. **J.** *Aulocera parapumilus mila* Lang, 2019, HT ♂, Tibet, Gongbo Gyamda, Mila, SATY0191, ANDR0134, CMNH. **K.** *Aulocera grandis* (Riley, 1923): (K1) ♂, Tibet, Tingri, Kharta, ex. HH, LSY; (K2) ♀, Tibet, Mt. Everest, MK; (K3) ♀, Tibet, Nyalam, MK. **L.** *Aulocera sikkimensis* (Staudinger, 1889): (L1) syntype ♂, Tibet, Chumbi, ZMHU, picture processed by "Flip Horizontal"; (L2) ♀, Tibet, VVT; (L3) ♂, Tibet, Gongbo Gyamda, Mila, SATY0192, LSY. **M.** *Aulocera bicolor* (Seitz, 1908), ♂, "*Satyrus pumilus* f. *bicolor* Seitz", Tibet, Chumbi valley, after Seitz (1908: pl. 42: f. b). **N.** *Aulocera pygmaea pygmaea* (Holik, 1949), syntypus ♀ (paralectotype), Kansu mer. Peiling shan, MTDG. **O.** *Aulocera pygmaea vadimi* Lang, 2019: (O1) PT ♂, Sichuan, Pingwu, SATY0776, LSY; (O2) PT ♀, ditto, SATY0777, LSY. **P.** *Aulocera atuntsensis* (Gross, 1959): (P1) allotypus ♀, A-tun-tse (Nord-Yünnan), ZFMK; (P2) paratypus ♀, ditto, ZFMK. **Q.** *Aulocera melanoleuca* Sakai, Aoki & Yamaguchi, 2001, ♀, Tibet, Zayv, Demu La, ex. HH, LSY. **R.** *Aulocera auloceroides* (Huang, 1999), HT ♀, Tibet, Mainling, Pai, HH. **S.** *Aulocera longanfua* Lang, 2021, PT ♀, Sichuan, Pingwu, SATY0775, LSY.

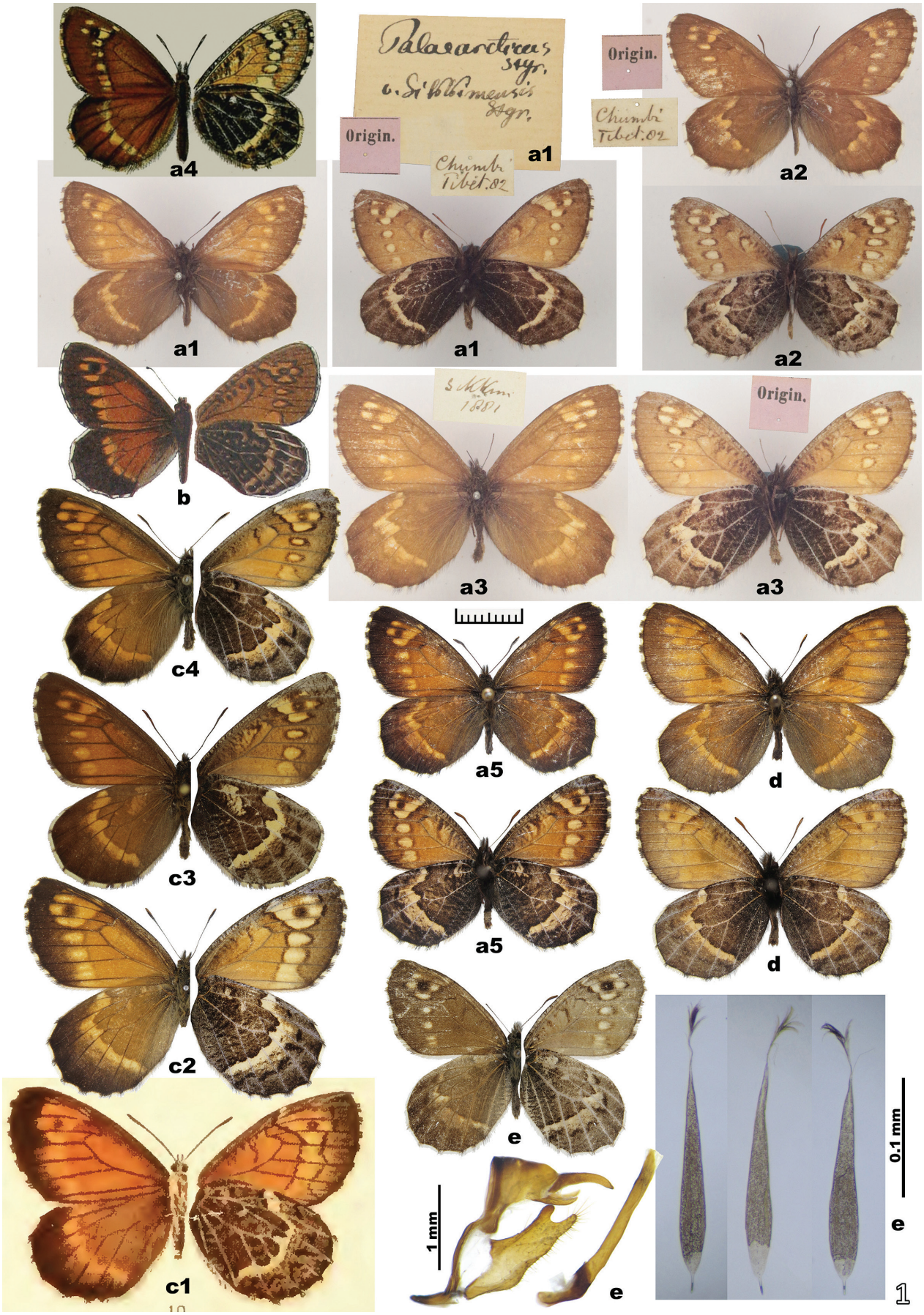
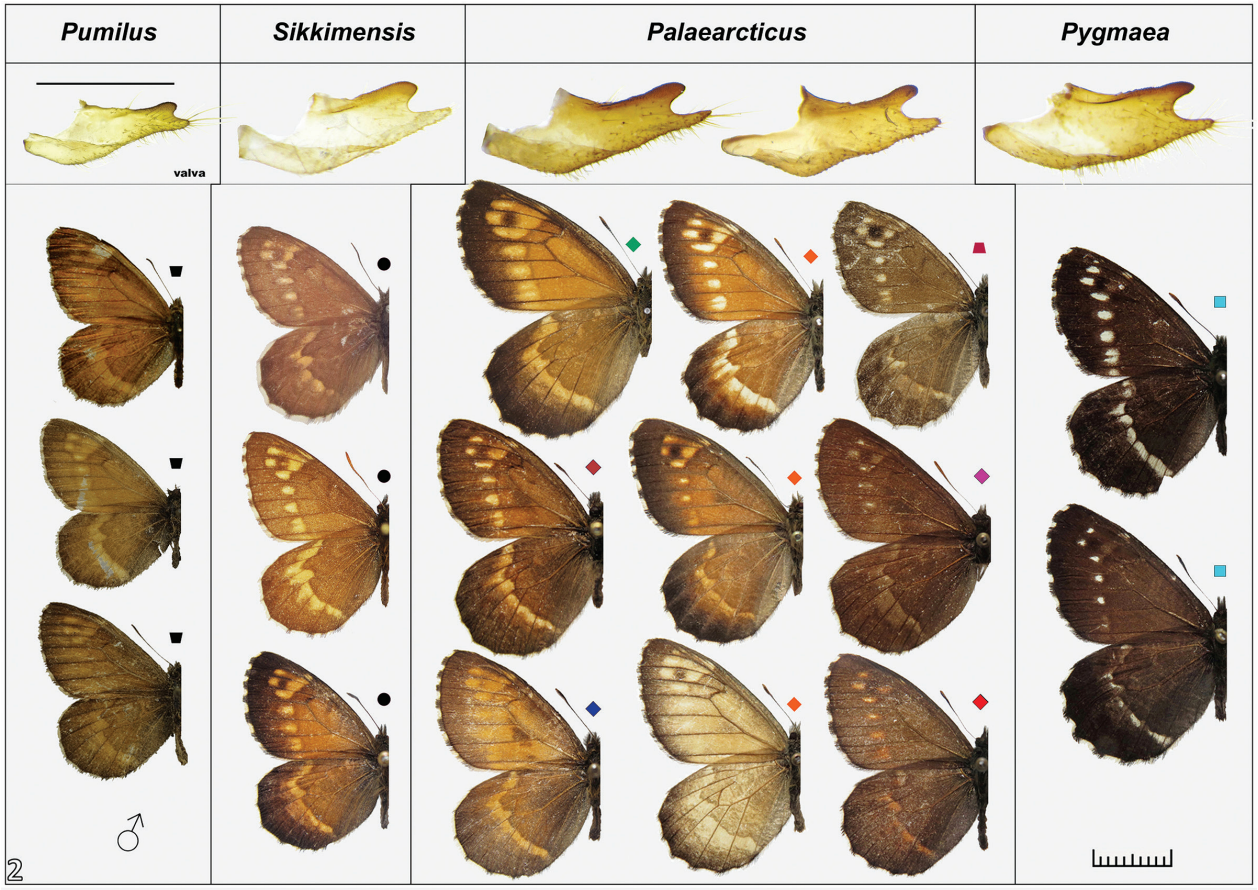


Fig. 1: a. *Aulocera sikkimensis* (Staudinger, 1889): (a1) syntype ♂, Tibet, Chumbi, ZMHU; (a2) syntype ♂, Tibet, Chumbi, ZMHU; (a3) syntype ♂, Sikkim, ZMHU; (a4) ♂, "*Chionobas pumilus*: Elwes", Sikkim, after Elwes (1882: pl. 25: 3); (a5) ♂, Tibet, Mila, SATY0192, LSY. **b.** *Aulocera bicolor* (Seitz, 1908), ♂, "*Satyrus pumilus* f. *bicolor* Seitz", Tibet, Chumbi, after Seitz (1908: f. 42b). **c.** *Aulocera grandis* (Riley, 1923): (c1) ♂, "*Paroeneis grandis* Riley", Tibet, Kharta, after Riley (1923: pl. 36: 10); (c2) ♂, Tibet, Kharta, ex. HH, LSY; (c3) ♂, Tibet, Nyalam, VVT; (c4) ♂, misidentified as "*bicolor* Seitz" in Lang (2022: pl. 10: 117; pl. XII: 36), Tibet, Nyalam, SATY1004, ex. HH, LSY. **d.** *Aulocera parapumilus mila* Lang, 2019, HT ♂, Tibet, Mila, SATY0191, ANDR0134, CMNH. **e.** *Aulocera palaearcticus* (Staudinger, 1889), ♂, Xinjiang, Qira, SATY1266, ANDR0320, LSY.



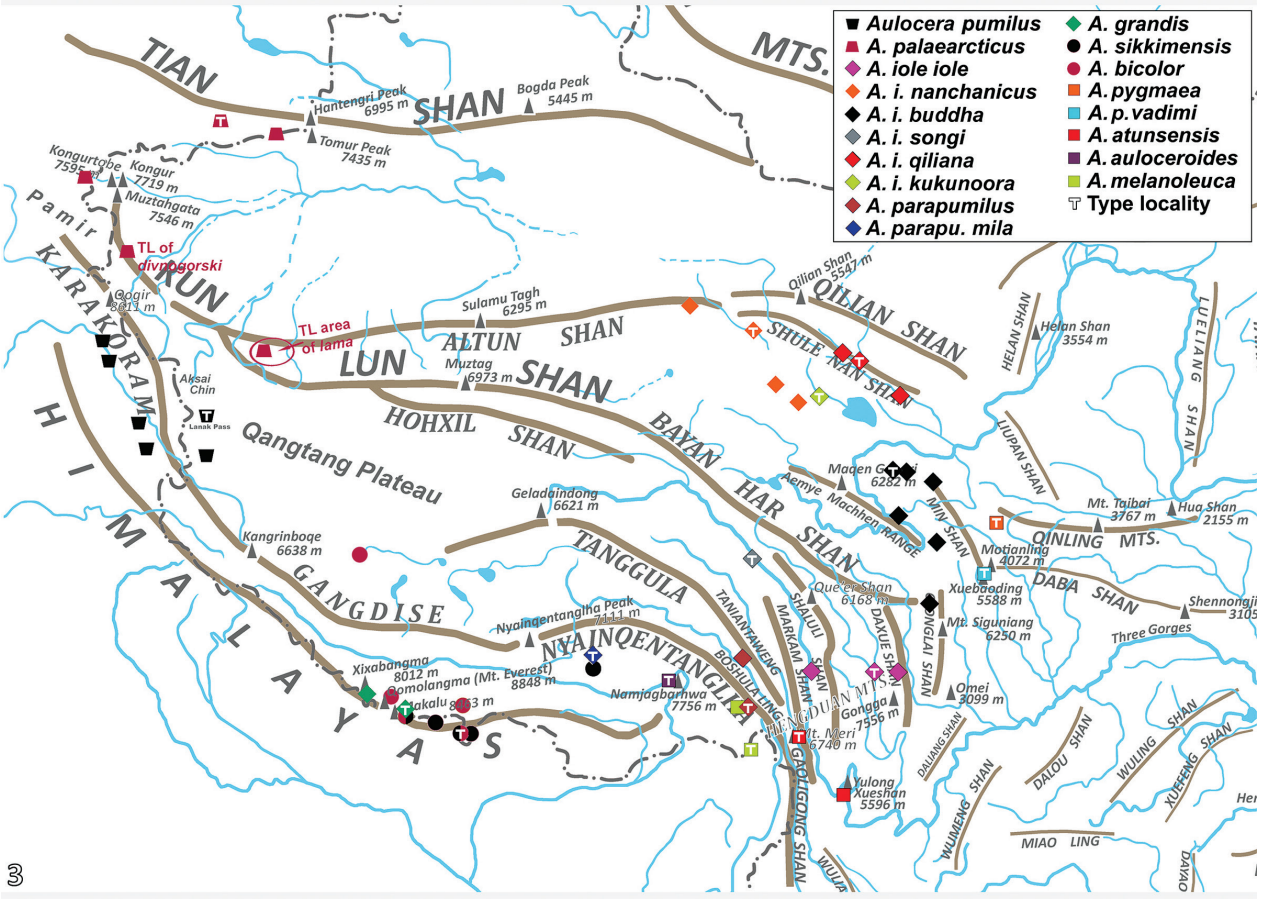


Fig. 2: An illustrated table for a comparison of the species complexes in the *Aulocera pumilus* (C. Felder & R. Felder, 1867)-group

Fig. 3: Distribution map of the *Aulocera pumilus* (C. &. R. Felder, 1867)-group (Sources of data: Riley, 1923; Fujioka, 1970; Gross, 1958; Huang, 1999, 2000, 2001; Sakai et al., 2001; Tshikolovets, 2005a, b; Lang, 2019, 2021, 2022; Lang & Huang, 2023; Specimens kept in CMNH, MTDG, ZFMK, ZISP, ZMHU, ZMKU, MK, VVT, HH, LSY).

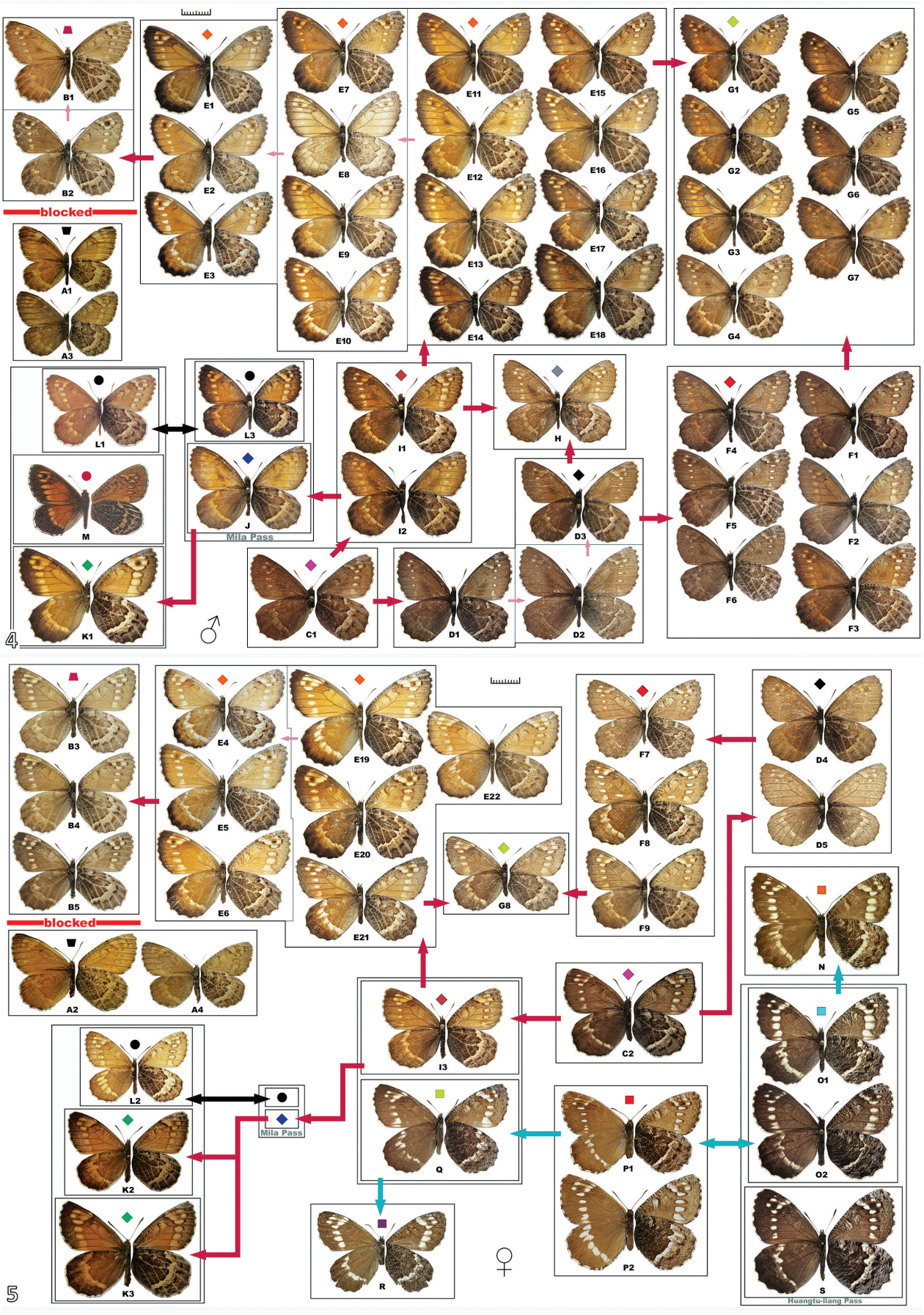


Fig. 4: The *Aulocera pumilus* (C. &. R. Felder)-group (excluding the *Pygmaea* Holik-complex), ♂, showing a speculative evolutionary relationship among them. **Fig. 5:** The *Aulocera pumilus* (C. &. R. Felder)-group and *A. longanfua* Lang, 2021, ♀, showing a speculative evolutionary relationship among them.