

On the presence of *Valerietta niphopasta* and *Valerietta hreblayi* nom. nov. in Europe and of *Chersotis andereggii* on the Balkan Peninsula (Lepidoptera: Noctuidae)

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Abstract. *Valerietta niphopasta* (Hampson, 1906) (= *Valerietta bulgarica* (Drenovsky, 1953) **syn. nov.**) and *Valerietta hreblayi* Beshkov **nom. nov.** (= *Valerietta bulgarica* sensu Hreblay, 1992, junior secondary homonym) are two distinct taxa, both occurring in Bulgaria. *V. niphopasta* is known in Europe only from SW Bulgaria, Kresna Gorge, published and illustrated before from there as "*Crypsedra niphopasta bulgarica* Dren." and from Vitosha Mnt., from where was described *Crypsedra niphopasta bulgarica* Drenovsky, 1953 **syn. nov.** The only known localities in Europe for *Valerietta hreblayi* are the Bulgarian Black Sea Coast, "Arkutino" and its surroundings south of Bourgas town, from where the neotype of *Valerietta bulgarica* was designed and the last taxon was redescribed. In fact the redescription of *V. bulgarica* sensu Hreblay, 1992 is a description of a new species-group taxon. A review of both taxa is given and the European representatives of the genus *Valerietta* with their genitalia, including the everted vesica are illustrated. *Chersotis andereggii* (Boisduval, [1837]) is known to occur with certainty on the Balkan Peninsula. Proved localities in SW Bulgaria are: S. Pirin mnt. and E. Rila mnt. The male genitalia, including the everted vesica, are illustrated here.

Samenvatting. Over het voorkomen van *Valerietta niphopasta* en *V. hreblayi* in Europa en van *Chersotis andereggii* op het Balkan schiereiland (Lepidoptera: Noctuidae) *Valerietta niphopasta* (Hampson, 1906) (= *Valerietta bulgarica* (Drenovsky, 1953) **syn. nov.**) en *Valerietta hreblayi* Beshkov **nom. nov.** (= *Valerietta bulgarica* sensu Hreblay, 1992, junior secondary homonym) zijn twee aparte taxa, welke allebei in Bulgarije voorkomen. *V. niphopasta* is in Europa alleen bekend uit Zuidwest-Bulgarije, Kresna Kloof, voordien vandaar gepubliceerd en geïllustreerd als "*Crypsedra niphopasta bulgarica* Dren." en uit het Vitosha gebergte vanwaar *Crypsedra niphopasta bulgarica* Drenovsky, 1953 **syn. nov.** beschreven werd. Het enige bekende gebied in Europa voor *Valerietta hreblayi* ligt aan de Bulgaarse Zwarte-Zee kust, "Arkutino" en de omgeving ten zuiden van de stad Burgas, vanwaar het neotype van *Valerietta bulgarica* werd aangeduid en vanwaar dit taxon werd beschreven. In feite is de herbeschrijving van *V. bulgarica* sensu Hreblay, 1992 de beschrijving van een nieuw taxon in de soortgroep. Een overzicht van beide taxa wordt gegeven en de Europese vertegenwoordigers van het genus *Valerietta*, alsook hun genitalia met uitgestulpte vesica worden afgebeeld. *Chersotis andereggii* (Boisduval, [1837]) is met zekerheid vastgesteld op het Balkanschiereiland. Zekere vindplaatsen in Zuidwest-Bulgarije zijn: het zuidelijke Piringebergte en het oostelijke Rilagebergte. De mannelijke genitalia, met uitgestulpte vesica, worden hier afgebeeld.

Résumé. Sur la présence de *Valerietta niphopasta* et *V. hreblayi* en Europe et de *Chersotis andereggii* dans la Péninsule balkanique (Lepidoptera: Noctuidae) *Valerietta niphopasta* (Hampson, 1906) (= *Valerietta bulgarica* (Drenovsky, 1953) **syn. nov.**) et *Valerietta hreblayi* Beshkov **nom. nov.** (= *Valerietta bulgarica* sensu Hreblay, 1992, homonyme secondaire plus récent) sont deux taxa distincts, présents tous les deux en Bulgarie. *V. niphopasta* n'est connue en Europe que de Bulgarie sud-ouest, crevasse Kresna, d'où l'espèce était décrite et illustrée comme "*Crypsedra niphopasta bulgarica* Dren.", et des monts Vitosha, d'où *Crypsedra niphopasta bulgarica* Drenowski, 1953 **syn. nov.** fut décrite. Les seules localités en Europe de *Valerietta hreblayi* se trouvent à la côte bulgare de la mer Noire, "Arkutino" et, dans les environs, au sud de la ville de Bourgas, d'où le néotype de *Valerietta bulgarica* fut désigné et d'où l'espèce fut décrite. En effet, la redescription de *V. bulgarica* sensu Hreblay, 1982 est la description d'un taxon nouveau dans le groupe-espèce. Une révision des deux taxa est proposée ici et les représentants européens du genre *Valerietta*, ainsi que leurs genitalia avec

vesica évaginée sont illustrés. *Chersotis andereggii* (Boisduval, [1837]) se trouve dans la Péninsule balkanique. Deux localités certaines en Bulgarie sud-ouest sont: la montagne Pirin méridionale et la montagne Rila orientale. Les genitalia mâles, avec vesica évaginée, sont illustrés ici.

Key words: Noctuidae – *Valerietta hreblyi* – *Valerietta niphopasta* – *Valerietta bulgarica* – *Chersotis andereggii* – faunistics – Bulgaria – genitalia.

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The genus *Valerietta* Draudt, 1938 (= *Lamprosticta* sensu auct., = *Crypsedra* sensu auct.) at present contains four species with Ponto-Caspian distribution (Ronkay & Ronkay 1995: 120) and a few undescribed species. All of them are very rare, known only from a few specimens with poorly known variability and with unknown biology. The lack of material for comparison and verification was the reason why some taxa have been described by monotypy into the *niphopasta* group, only on the base of comparison with not well elaborated illustrations and descriptions.

The first *Valerietta* specimen, reported from Europe is a single male collected by Drenovsky in Bulgaria (Vitosha mnt. near Dragalevski Manastir, 930 m, 10.V.1947). The specimen was collected during the day, on a trunk of beech (*Fagus sylvatica* L.) (Drenovsky 1953). Drenovsky compared the specimen to *Crypsedra niphopasta* from Syria (type locality: Akbes) as figured by Warren (in Seitz 1914: 133, fig. 32g.) and on the base of this comparison he described it as a new subspecies named *Crypsedra niphopasta bulgarica*. The original description is supplied with monochrome figures of the upper- and underside of the specimen and the head in lateral view (Fig. 1.). According to Drenovsky, the main differences between the specimen from Vitosha and the one illustrated in Seitz are size, forewing colour and pattern. The holotype (by monotypy) of *C. niphopasta bulgarica* has a forewing length of 14 mm, wingspan 28 mm, whereas the type of *C. niphopasta* figured in Seitz has a forewing length of 16 mm and wingspan 32 mm. The forewings of the specimen figured in Seitz are white, the orbicular spot is very small and orbicular and reniform spots are not connected to each other. The forewings of Drenovsky's specimen are grey with brownish scales; both spots are white and centred with a brownish dot. In the holotype of *C. n. bulgarica* the submarginal lines are composed of black and brown crescents, limited internally by six black pointed wedge-like spots, situated vertically to the margin and continuing internally up to the double median line. In the specimen figured in Seitz the wedge-like spots take the form of crescents. On the distal half of the costal margin in the Bulgarian specimen there are six black dots of different size, beginning above the two spots and continuing almost to the apex. In Seitz's specimen these spots are missing. Furthermore, in the terminal fascia in the specimen illustrated in Seitz there are 4–5 black spots pointing towards the outer margin; these are missing in Drenovsky's specimen. On the base of the differences given above,

Drenovsky described the specimen from Vitosha as *Crypsedra niphopasta bulgarica* Drenovsky, 1953. We think, the differences Drenovsky found between the only two *Valerietta* specimens known that time are due to a comparison with that not so well and correctly elaborated illustration in Seitz. The reason of our opinion is, that the painted illustration in Seitz and the photograph in Hreblay (1992, pl. I, fig. 5), which both show one and the same specimen (the holotype of *niphopasta* Hampson, 1906) are rather different. Moreover, the Bulgarian specimen described and illustrated by Drenovsky shows no important differences with the holotype of *Valerietta niphopasta* illustrated in Hreblay (1992).

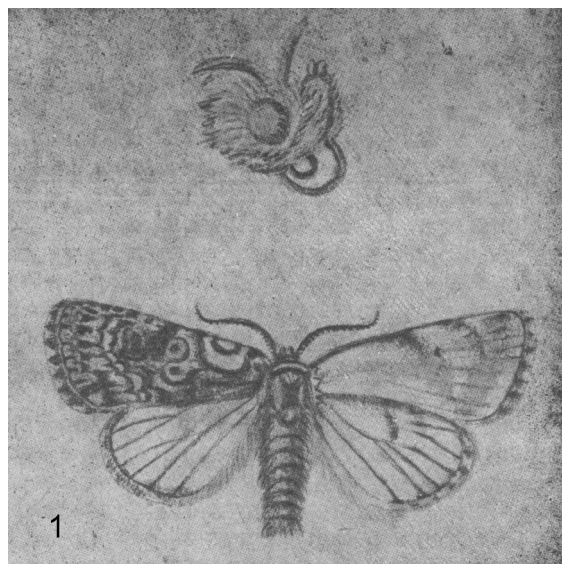


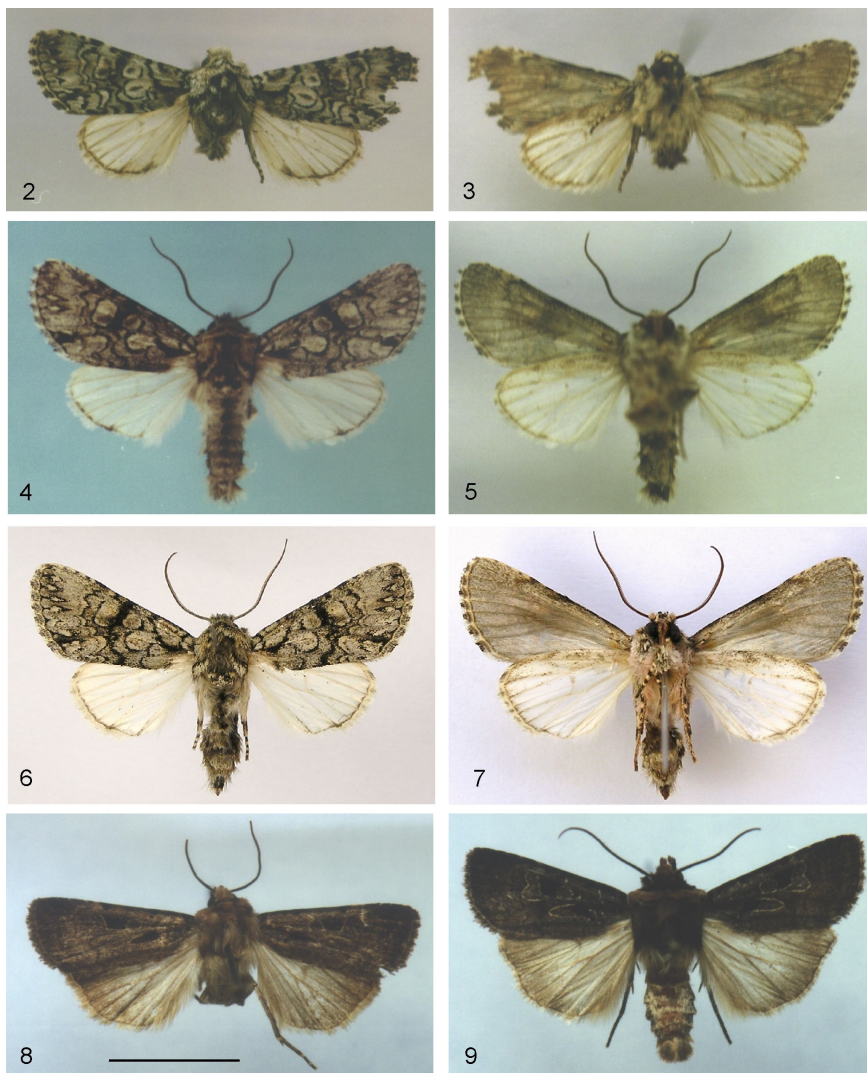
Fig. 1.– *Valerietta niphopasta niphopasta* (Hampson, 1906). Facsimile of the original illustration of *Crypsedra niphopasta bulgarica* Drenovsky, 1953 from Vitosha mnt.

During more than 30 years the type specimen of Drenovsky remained the only known representative of the genus *Valerietta* in Europe. The genera *Valerietta*/*Crypsedra* (respectively the taxa *niphopasta* Hampson /*bulgarica* Drenovsky) were omitted for Europe in Hartig & Heinicke (1973) and for Bulgaria in Ganey (1982). Slivov (1984: 61) reported a single specimen determined as "*Crypsedra niphopasta bulgarica* Dren." from "Spirka Kresna, 28–30.V.1979, 1 male at an electric light". On the same page the specimen is figured in monochrome. Slivov compared this specimen (Figs 2–3) to the original description of *bulgarica* Drenovsky and found it to correspond rather well to this description and illustration. For this reason, he recognized it as "*Crypsedra niphopasta bulgarica* Dren.". Another *Valerietta niphopasta* specimen which the senior author examined was caught in Asia Minor, Prov. Antalya, 3 km to Cevizli village from Akseki, 1200 m, 12.V.1999, T. Drechsel,

S. Beshkov & J. Gelbrecht leg. at 160 W MVL, in coll. T. Drechsel, 1 male. This specimen is similar to the specimens from Arkutino, but has a dark centre in the stigmata and a large black spot on the outer margin before the tornus. Some more localities of *V. niphopasta*, all in Turkey can be found in Hreblay (1992: 237).

The next report of *V. niphopasta* is that in Hacker, Kuhna & Gross (1986: 109) as a species new for Turkey (Prov. Konya and Prov. Antalya), illustrated in monochrome (op. cit. pl. 2, fig. 16). In Poole (1989: 985–986) *Crypsedra niphopasta* subsp. *bulgarica* Dryanovski [sic!], 1953 is given as a synonym of *Valerietta niphopasta* (Hampson). Later on, Hacker (1989: 183) used the name *Valerietta niphopasta bulgarica* (Drenowski, 1955) [sic!], referring to all the previously known localities: Vitosha mnt. (Dragalevski Manastir) and Kresna, and mentioning a new locality "Arkutino" (leg. and coll. Varga). Fibiger & Hacker (1990: 43) elevated *bulgarica* to specific rank and stated that it occurs also in Turkey. Hacker (1990: 164–165) listed *V. bulgarica* for the Balkan Peninsula and Anatolia, and *V. niphopasta* for Turkey and Northern Iran.

Hreblay (1992: 237) could not find the type of *Crypsedra niphopasta bulgarica* and designated the specimen from Arkutino as a neotype. Hreblay (pers. comm. 3.VII.1994) preferred to retain the name of Drenovsky (not make a synonym from it), because it was not possible for him to prove, that the neotype is different from the insect illustrated by Drenovsky. He regarded the neotype of *V. bulgarica* as a bona sp. The male genitalia, including the everted vesica of both *V. bulgarica* and *V. niphopasta* are illustrated and *V. bulgarica* is redescribed. In fact, this redescription of *V. bulgarica* sensu Hreblay, 1992 is a description of a **new** species group taxon, different from *bulgarica* Drenovsky, 1953. The designation of the neotype by Hreblay however, is based on erroneously determined material, it does not "define the nominal taxon objectively" (ICZN 1999, Art. 75.1.) and does not satisfy articles 75.3.5. and 75.3.6. of the ICZN (1999), or Art. 75(d)(4)(5) of the Code current at that time (ICZN 1985). In Hreblay (1992) both species (holotype of *V. niphopasta* and neotype of *V. bulgarica*) are illustrated in colour (Pl. I, figs. 5–8). According to Hreblay (1992) the main differences between *V. niphopasta* and *V. bulgarica* (neotype from "Arkutino") are expressed in the stigmata: *V. bulgarica* sensu Hreblay, 1992 is the only representative of the genus without dark centres in the stigmata (however, from the primary source of Drenovsky, both from the text and the illustration it is clear that the stigmata of *bulgarica* are with dark centres!) – (see Art. 75.3.5. of the current Code or Art. 75(d)(4) from the previous Code). Therefore, the name *bulgarica* sensu Hreblay, 1992 should be considered a primary homonym and it does not satisfy Art. 52.1. of the Code (ICZN 1999). Other minor differences can be found in the ground colour and cross lines. The wingspan of the neotype is the same as in the Drenovsky's type – 28 mm. In the male genitalia, including the everted vesica, there appears to be no important difference between the species, except that the base of the right harpe is less developed in *V. bulgarica* sensu Hreblay, 1992.



Figs. 2–3. *Valerietta niphopasta niphopasta* (Hampson, 1906), ♂. SW Bulgaria, Kresna Gorge, Stara Kresna Railway Station, 200 m, 28–30.V.1979, A. Slivov leg., 2.– upperside; 3.– underside.

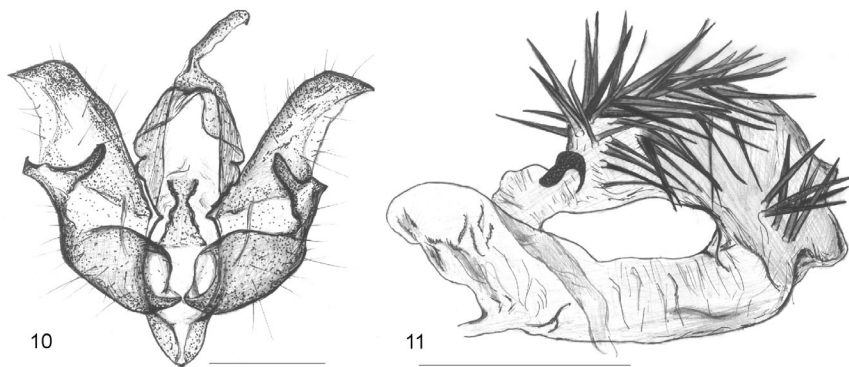
Figs. 4–7. *Valerietta hreblayi* Beshkov, nom. n.. Bulgaria, Black Sea Coast, Arkutino near Primorsko, Bourgas region, 08.VI.1998, Beshkov, Nowacki & Palka leg., males, 4, 6.– upperside; 5, 7.– underside (4, 5 in coll. Nowacki, 6, 7 in coll. Beshkov).

Figs. 8–9. *Chersotis andereggii andereggii* (Boisduval, [1837]), ♂, upperside. 8.– SW Bulgaria, South Pirin mnt., Gotze Delchev Chalet, 1600 m, 04.VIII.1981, A. Slivov leg.; 9.– Turkey, Karadeniz Daglari, Prov. Artvin, Yusufeli district, below Yaylalar Village, 1800 m, 18.VII.1995, S. Beshkov, J. Gelbrecht & E. Schwabe leg.; scale bar 10 mm.

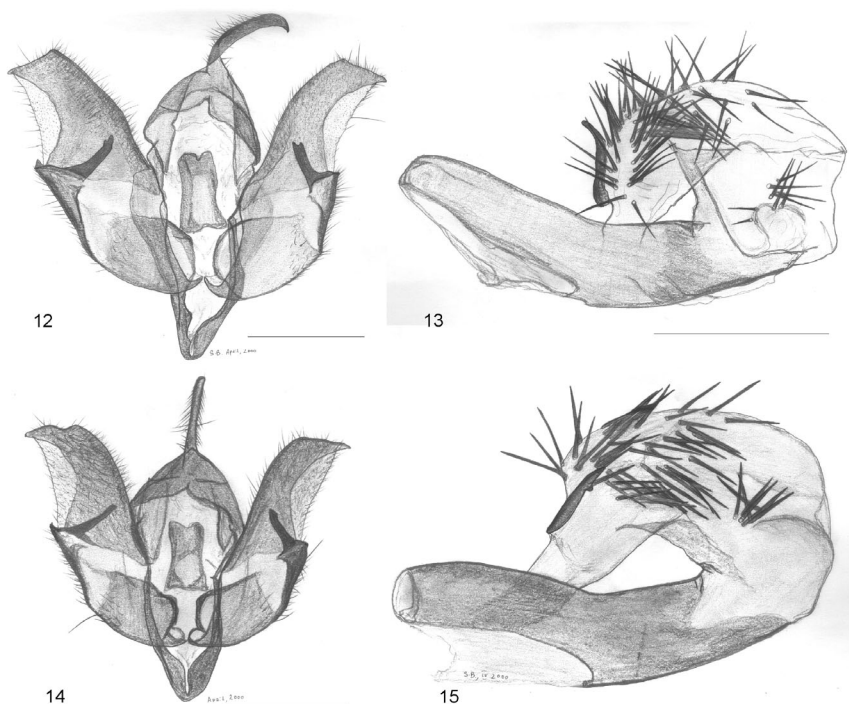
Ronkay & Ronkay (1996: 120–122) were also unable to find the type of *Crypsedra niphopasta bulgarica* Drenovsky and accepted the opinion of Hreblay (1992). They also recognised *V. bulgarica* (neotype) as a species distinct from *V. niphopasta*. Both taxa were illustrated in colour (Pl. 3, figs. 40–42) and the male genitalia including the everted vesica of *V. bulgarica* (neotype) were figured again (p. 179, figs. 107–108). A short diagnosis of *V. bulgarica* was given, as well as the differences in exterior morphology and in the genitalic characters from other members of the *V. niphopasta*-group. In all, they confirmed the opinion of Hreblay (1992).

The specimen from Arkutino designated as a neotype of *V. bulgarica* looks different from the other specimens we have seen. It shows also differences from the illustrations and the description of the type of Drenovsky. The senior author heard that the type of *Crypsedra niphopasta bulgarica* is deposited in National Museum of Natural History (Sofia). He carefully checked several times all collections in the Museum, but the type was not found there. He also spent a couple of nights in Vitosha mnt., near Dragalevski Manastir, in late May, but no single *Valerietta* specimen was found there. The only *Valerietta* specimen we found in the collection of the Institute of Zoology, Bulgarian Academy of Sciences, was the male taken by Slivov in Kresna, identified as *Crypsedra niphopasta bulgarica*. As it was mentioned above, Slivov (1984: 61) illustrated it in monochrome. It corresponds rather well to the original description of *bulgarica* Drenovsky, as well as to *V. n. niphopasta* (Hampson) illustrated in the literature mentioned above. However, it differs from *V. bulgarica* sensu Hreblay, 1992. Although there are no significant differences in the male genitalia in the specimen from Kresna (Figs. 10–11) (Gen. prep. No. 2./09.III.1995, S. Beshkov) they look more similar to these of *V. n. niphopasta* (Hampson). The wingspan of this specimen is 29.5 mm., forewing length 13 mm. There is no doubt that the specimen from Kresna is *Valerietta niphopasta niphopasta* (Hampson, 1906), whereas *V. bulgarica* sensu Hreblay, 1992 is a distinct species, different both from *V. n. niphopasta* (Hampson) and from *V. n. bulgarica* (Drenovsky).

Two males of *Valerietta bulgarica* sensu Hreblay, 1992 have been collected near Arkutino in "Ropotamo Forest Farm" (Figs. 4–7) on 08.VI.1998 at 160 W MVL with 25 W black lamp, one at 22:40 and another at 23:30 local time (Beshkov, Nowacki & Palka 1999: 176; Beshkov 2000: 68), gen. preps with everted vesica 1./03.VII.1998 (Figs. 12–13) and 2./03.VII.1998 (Figs. 14–15), S. Beshkov. The habitat there is a humid warm forest (*Quercus-Fraxinus-Carpinus* mixed forest with several kinds of lianas) very close to a swamp. At the same time another, stronger lamp was lighted 100–150 m away in dry *Quercus* forest, but no *Valerietta* specimen was captured there.



Figs. 10–11. *Valerietta niphopasta niphopasta* (Hampson, 1906), ♂. SW Bulgaria, Kresna Gorge, Stara Kresna Railway Station, 200 m, 28–30.V.1979, A. Slivov leg.: **10**.– genitalia; **11**.– everted vesica (Gen. prep. 2./09.III.1995, S. Beshkov), scale bar 1 mm.



Figs. 12–15. *Valerietta hreblayi* Beshkov, nom. n. Bulgaria, Black Sea Coast, Arkutino near Primorsko, Bourgas region, 08.VI.1998, Beshkov, Nowacki & Palka leg.; **12, 14**.– male genitalia; **13, 15**.– everted vesicas in euparal under a cover glass (14–15 gen. prep. 2./03.VII.1998, S. Beshkov, in coll. Nowacki; 12–13 gen. prep. 1./03.VII.1998, S. Beshkov, in coll. Beshkov), scale bar 1 mm.

Less than 200 m from the first locality where the species was found in 1998, a single male specimen was collected in a light trap on 18.VI.2001, J. Nowacki & S. Beshkov leg., in coll. M. Fibiger. About 200 m further no other *Valerietta* specimens were seen on light. Some sympatric and synchronic species there were: *Nychiodes waltheri* Wagner, 1919, *Craniophora pontica* (Staudinger, 1879), *Atypha pulmonaris* (Esper, [1790]), *Apamea syriaca* (Osthelder, 1933), *Mythimna congrua* (Hübner, [1817]), and *Eilema depressa* (Esper, [1787]).

Only about 800 m from the "Ropotamo Forest Farm" near Arkutino, in "Pyasachna Lilia" Natural Reserve (Fig. 16) 2♂ of *Valerietta bulgarica* sensu Hreblay, 1992 were collected on 17.VI.2001 at a 250 W MVL, J. Nowacki & S. Beshkov leg., in coll. Nowacki. The habitat there is coastal, termophile, dry mixed *Quercus* forest on a sandy hill between the sea and a river with aquatic vegetation on one of the sides and dunes with *Pancratium maritimum* L. on the other side. About 300 m away, in the dunes no *Valerietta* specimens were found and the species composition was completely different. Sympatric and synchronic species to *Valerietta bulgarica* sensu Hreblay, 1992 were: *Dyspessa salicicola* (Eversmann, 1848), *Nychiodes waltheri* Wagner, 1919, *Geometra palilionaria* (Linnaeus, 1758), *Atypha pulmonaris* (Esper, [1790]), *Cosmia confinis* Herrich-Schäffer, [1849], *Apamea syriaca* (Osthelder, 1933), *Archanara dissoluta* (Treitschke, 1825), *Oria musculosa* (Hübner, [1808]), *Mythimna straminea* (Treitschke, 1825), and *Eilema depressa* (Esper, [1787]).

An additional locality of *Valerietta bulgarica* sensu Hreblay, 1992, about 3–4 km south from the localities mentioned above is the bridge on the Ropotamo River near Primorsko, an old *Fraxinus* forest, 06.VI.2003, 1♂, S. Beshkov & Ph. Fastre leg. at a 160W MVL with 18W black tube, in coll. Fastre.

These findings suggest that *Valerietta bulgarica* sensu Hreblay has also two generations (Beshkov 2000: 68). The forewing length of the specimens from the first generation is approximately 14 mm, the wing span is 30 mm. Prof. Z. Varga informed the senior author (pers. comm. February, 2004) that the specimen collected by him (the neotype of *Valerietta bulgarica* sensu Hreblay) originated from a dry, warm *Quercus* forest in the sandy dunes near the sea coast. Mr Z. Kolev informed me (S. Beshkov) about 30 specimens, including females collected by lepidopterologists from Finland in several localities, at different times and in different biotopes near Arkutino. Both habitats ("Ropotamo Forest Farm" near Arkutino and "Pyasachna Lilia" Natural Reserve) are very close to each other and it is difficult to point out which is the typical one for *Valerietta bulgarica* sensu Hreblay, 1992. From the common features for both habitats it is clear that *Valerietta bulgarica* sensu Hreblay, 1992 inhabits both dry and humid mixed *Quercus* forests, limited by swamps with aquatic vegetation. Sympatric and synchronic species for the findings of June 1998 as well as the species composition of the "Pyasachna Lilia" Natural Reserve can be found in Beshkov, Nowacki & Palka, 1999.



Fig. 16.– Habitat of *Valerietta hreblayi*: "Pyasachna Lilia" Natural Reserve near Arkutino in June.

Our opinion is that *bulgarica* Drenovsky, 1953 is conspecific with *Valerietta niphopasta niphopasta* (Hampson, 1906), and *Valerietta bulgarica* sensu Hreblay, 1992 is a distinct taxon. This also was the subsequent opinion of Hreblay (pers. comm. 3.VII.1994). According to Ronkay & Ronkay (1995: 121) *bulgarica* sensu Hreblay is a distinct species from *niphopasta* Hampson. However, *Valerietta bulgarica* sensu Hreblay is a junior secondary homonym (ICZN, Art. 57.3.1.) with *bulgarica* Drenovsky, 1953 and for this reason a **replacement name** (ICZN, Art. 60.3.) is given here – *Valerietta hreblayi* Beshkov **nomen novum**. *V. hreblayi* Beshkov seems to fly in two generations: the first half of June (Beshkov, Nowacki & Palka 1999: 176; Beshkov 2000: 68 as *V. bulgarica*) and in the beginning of August (neotype of *Valerietta bulgarica*) (in Hreblay – 03.VIII.1973; in Ronkay & Ronkay – VII.1977). However, it is known that *V. niphopasta* in Turkey has also two generations: May–June and August–September (Hacker 1996: 287). The flight period of *niphopasta* (holotype of *bulgarica* Drenovsky) is early May and it was found at an altitude of 930 m., at rest on a trunk of *Fagus*; *V. hreblayi* Beshkov **nom. n.** was found only at light near a warm, dry or humid *Quercus*/*Fraxinus* forest close to the sea and at sea level. In Kresna, the *V. niphopasta* specimen was collected at the end of May at light near a warm, dry, mixed oak forest in an arid stony area at an altitude of 200 m. *Valerietta niphopasta niphopasta* has a pontomediterranean distribution, whereas *Valerietta hreblayi* is an endemic in the South-Bulgarian Black Sea coast region.

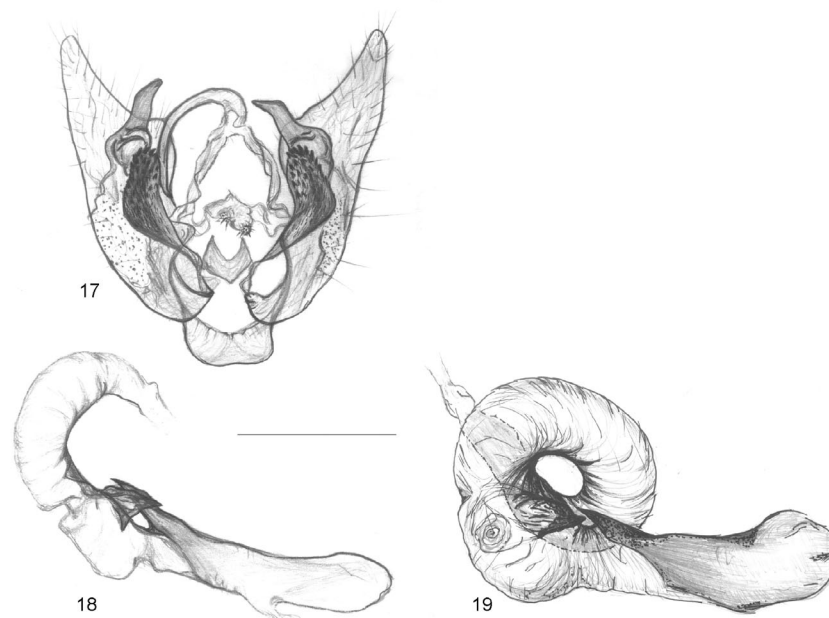
Valerietta niphopasta niphopasta (Hampson, 1906)
 syn.: *Valerietta niphopasta bulgarica* (Drenovsky, 1953), **syn. nov.**
Valerietta hreblayi Beshkov, 2006 **nom. nov., replacement name**
 syn.: *Valerietta bulgarica* sensu Hreblay, 1992, nec Drenovsky, 1953,
junior secondary homonym

The new replacement name is given in honour of the eminent Hungarian lepidopterologist, the late Dr. Marton Hreblay.

Another record that requires elucidation is that of Slivov (1984) for *Chersotis andereggii* (Boisduval, [1837]). Slivov (1984: 57) reported it as a new species for Bulgaria from "Pirin mnt., G. Delchev Chalet, 1600 m, 04.VIII.1981, 1 male at electrical light". *Ch. andereggii* is a species closely related to *Ch. rectangula* ([Denis & Schiffermüller], 1775) and confusion with it is possible. Not long ago both species were regarded as conspecific. Boursin (1952: 53) first recognized *Ch. andereggii* as a distinct species, and on the differences in genitalia, biotopes and range separated it from *Ch. rectangula*. We again very carefully examined the specimen from Pirin (Fig. 8.) (wingspan 32.5 mm.) and its genitalia (Gen. prep. No. 1./09.III.1995, S. Beshkov) (Figs. 17–18) and can confirm its identity as *Chersotis andereggii andereggii* (Boisduval, [1837]). Another Bulgarian locally is Rila mnt., Grantchar (= Boris Hadzhisotirov) Chalet, 2200 m, 27–29.VII.1975, also leg. and in coll. Al. Slivov in Institute of Zoology, Bulgarian Academy of Sciences, Sofia. This specimen with its genitalia, including the everted vesica, is illustrated in Beshkov (2000: 242, figs. 118–119, 267, fig. 14). At present, these are the only confirmed specimens of *Ch. andereggii* from the Balkan Peninsula. The reports of Hacker (1989: 58; 1990: 68) for *Chersotis andereggii* for Greece follow uncertain literature data for Peloponnesus, Chelmos mnt., 2200 m. The report of Zecevic (1996: 59) for Serbia also needs confirmation. Vasić (2002: 262) reported *Chersotis andereggii* from Serbia (Rimski Shanchevi, 8.V.1950) [sic!]. According to him, *Ch. andereggii* occurs in the high mountains of Macedonia as well. This report also needs confirmation. In Vasić (2002: 262) July–August is given as the flight period, but his data (originating from his collection and card-index) are from May. The senior author examined most of the specimens from the Balkan Peninsula presented in the collections in Bulgaria and checked many genitalia, but failed to find other specimens of *Chersotis andereggii*. All specimens were of the widespread *Chersotis rectangula*, a species reported as new for Bulgaria by Tuleschkow (1931a: 28; 1931b: 193) from Alibotoush [= Slavyanka] mnt. in SW Bulgaria at an altitude of 1500 m.

In Fibiger (1993), *Ch. andereggii* is not shown for the Balkan Peninsula on the distribution map. Its distribution in Europe is given as follows: "boreo-alpine, known from the northern Pyrenees (France), the Alps, the south-western coast of Finland, northern Estonia and Russia (the southern Ural Mountains)". The population of the south-western coast of Finland and northern Estonia is

inhabited by a distinct subspecies, *Chersotis andereggii acrana* Mikkola, 1987 (Mikkola, Lafontaine & Grotenfelt 1987). In the same paper, *Ch. andereggii* is again not marked for the Balkan Peninsula. Our specimen shows unimportant differences in appearance and genital characteristics, including the everted vesica, from *Ch. andereggii acrana*, illustrated in Mikkola *et al.* (1987), from *Ch. andereggii andereggii* from Turkey (Figs. 9, 19), from the specimens from France (Alpes- Maritimes) present in the collection of the senior author and from specimens from the Alps (TL. Switzerland, Wallis), illustrated in colour in Fibiger (1993: pl. 2).



Figs 17–18. *Chersotis andereggii* (Boisduval, [1837]), ♂. SW Bulgaria, South Pirin mnt., Gotze Delchev Chalet, 1600 m, 04.VIII.1981, A. Slivov leg., Gen. prep. 1./09.III.1995, S. Beshkov. **17.**—genital armature; **18.**— not fully everted vesica.

Fig. 19. *Chersotis andereggii* (Boisduval, [1837]), ♂. Turkey, Karadeniz Daglari, Prov. Artvin, Yusufeli district, below Yaylalar Village, 1800 m, 18.VII.1995, S. Beshkov, J. Gilbrecht & E. Schwabe leg. Everted vesica (Gen. prep. 1./25.III.1997, S. Beshkov); scale bar 1 mm.

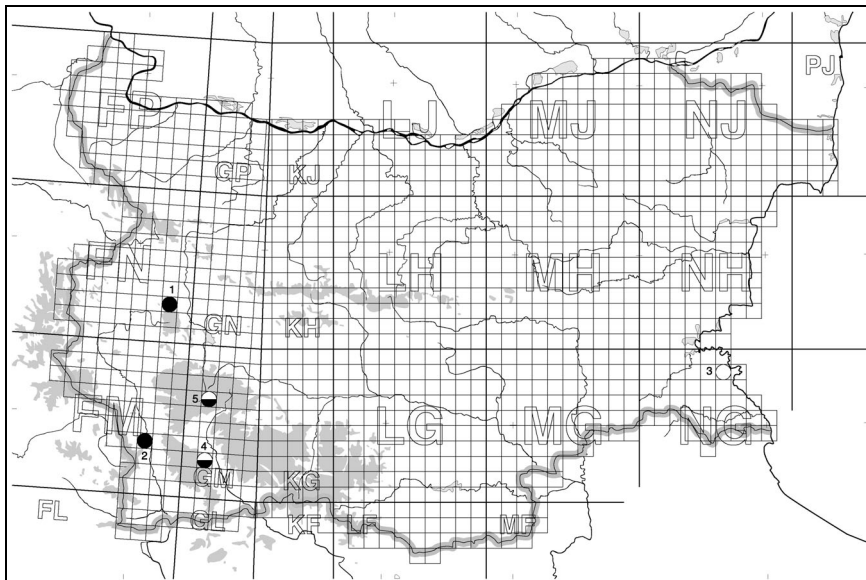


Fig. 20. Map of Bulgaria showing European localities of *Valerietta niphopasta* (Hampson, 1906) and *V. hreblayi* Beshkov, 2006, and Balkan localities of *Chersotis andereggii* (Boisduval, [1837]);

Valerietta niphopasta (Hampson, 1906): 1.– Vitosha mnt. near Dragalevski Manastir, Sofia District, 930 m; 2.– Kresna Gorge, Stara Kresna Railway Station, 200 m

Valerietta hreblayi Beshkov, 2006: 3.– Arkutino near Primorsko and surroundings, Bourgas region.

Chersotis andereggii (Boisduval, [1837]) surely proved localities on the Balkan Peninsula; 4.– South Pirin mnt., Gotze Delchev Chalet, 1600 m; 5.– Rila mnt., Grantchar (= Boris Hadzhisotirov) Chalet, 2200 m

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