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When disrupted characters between species link: a new species of *Conistra* from Sicily (Noctuidae)

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Abstract. *Conistra iana* sp. n. is described from Sicily. The new species is characterised by an unusual intermingling of characters deemed to be diagnostic for *C. vaccinii* (Linnaeus, 1761) and *C. ligula* (Esper, 1791), and shows also some exclusive features. An overall survey of closest congeners revealed that all checked females of "*C. ligula*" from the south-east Mediterranean are devoid of signum and sparse "*C. alicia*" from southern Spain and Morocco show markedly dilated postero-lateral processes of antrum, both findings calling for further research on these nominal taxa inasmuch additional entities might be hidden. *Orrhodia vaccinii nigra* A. Bang-Haas, 1907 is shown to be a senior synonym for *Conistra (Orrhodia) alicia* Lajonquière, 1939 **syn. n.** and declared as *nomen oblitum* in favour of the younger name as *nomen protectum*.

Key words. *Conistra*, Noctuidae, new species, Sicily.

Introduction

Zilli (1995) quoted the bizarre occurrence in Sicilian specimens of "*Conistra vaccinii* (Linnaeus, 1761)" of an outwardly produced apex of forewing (Figs. 1–2), a feature hitherto considered to be diagnostic of *C. ligula* (Esper, 1791) (e.g. Guenée 1852; Tutt 1892; South 1961; Bretherton et al. 1983), thus raising doubts about the published records for the latter species in Sicily. The preliminary identification of those specimens as *C. vaccinii* rather than *C. ligula* was based on the occurrence of characters deemed to be diagnostic for *C. vaccinii*, viz. a clearly lobed submarginal shade on the forewing underside (Fig. 9), an anchor-shaped juxta and a bulbous and apically blunt basal cornutus on the everted vesica (viz. the distal cornutus of the aedeagus, if vesica is not everted) (cf. Lajonquière & Boursin 1943; Koch 1958; Berio 1985) (Figs. 13, 17a–c, 22a–c, 27a–d). Nevertheless, new insights into the morphology of both male and female specimens from Sicily further revealed the linkage of 'vaccinioid' and 'liguloid' characters in the relevant populations. This fact, together with the detection of some unique features, indicates that these populations cannot be assigned to either of the two or any other taxon of the *C. vaccinii* species-group, as defined by Ronkay et al. (2001). The Sicilian populations are therefore deemed to represent a new species which is described here. Nevertheless, in order to properly address the issue of the taxonomic characterisation of the new species, it was first necessary to circumscribe clearly the ranges of variation shown by its closest congeners. This was done by surveying material from different districts of the species' ranges.

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Materials and methods

A thorough check of published information on the structural characters of taxa of the *Conistra (Conistra) vaccinii* species-group was first made (Pierce 1909, 1910; Lajonquière 1939; Lajonquière & Boursin 1943; Kostrowicki 1956; Sugi 1959, 1982; Rungs 1972; Kishida & Yoshimoto 1979; Laever 1979; Berio 1983, 1985; Calle 1983; Gómez de Aizpúrua 1987; Yela et al. 1988; Hacker 1990; Hreblay 1992; Yela 1992; Rákosy 1996; Fibiger 1997; Hreblay & Ronkay 1998; Ronkay et al. 2001; Kononenko 2003). As the Sicilian taxon was found to be more closely related to a triplet of species consisting of *C. vaccinii*, *C. ligula* and *C. alicia* Lajonquière, 1939, traditionally regarded as difficult to differentiate from one another, study material of the four species from the following locations was gathered and specimens dissected:
Conistra vaccinii: Finland, France, Corsica, Switzerland, Italy, Czech Republic, Romania, Bulgaria, Russia (Ural), Turkey (28 ♂, 13♀).
Conistra ligula: Morocco, Algeria, Spain, Holland, Germany, Switzerland, Italy, Sicily, Bulgaria, Greece, Turkey (25♂, 34♀).
Conistra alicia: Morocco, Algeria, Tunisia, Spain, France (4♂, 8♀).
Conistra sp.: Sicily (10♂, 11♀).

Genitalia preparations, pictures and drawings were produced following the standard methods in lepidopterology (e.g. Grassi & Zilli 2005a). Measurements and counts were taken with the aid of a camera lucida. Numbers of the median cornuti include even the smallest. A random subset of *C. vaccinii* and *C. ligula* was also taken in order to compare the mean lengths (expressed in mm) of quantitatively varying characters with respect to the Sicilian species by Student's *t* test (Scossiroli & Palenzona 1971). The chosen characters were the basal bulbous cornutus (this shared only between *C. vaccinii* and *Conistra* sp.) and the antrum, which was measured from anterior margin to bottom point of ostial curved slit. In contrast, a non-parametric Mann-Whitney *U*-test was performed in order to compare the medians of the distributions of the small cornuti between *C. vaccinii* and *C. ligula*, inasmuch counts of discrete objects rarely show a normal distribution which allow *t* test to be applied (Fowler & Cohen 1993).

Abbreviations

AG	coll. A. Grassi, Rome	L	length
AZ	coll. A. Zilli, Rome	N	sample size
HNHM	Hungarian Natural History Museum, Budapest	P	probability level
MF	coll. M. Fibiger, Sorø	s	standard deviation
MHNG	Muséum d'Histoire Naturelle, Geneve	*t*	Student's *t*
MNHB	Museum of Natural History, Bergamo, Italy	*U*	Mann-Whitney *U*
MZR	Museum of Zoology, Rome	x	mean
PP	coll. P. Parenzan, Bari		

Results

The new species was shown to be more closely related to *C. vaccinii* and *C. ligula* than to *C. alicia*. The main diagnostic differences between these species and their ranges of variation can be synthetically summarised as follows.

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Figs. 1–8. Habitus of *Conistra* spp. **1–2.** *C. iana* sp. n., Sicily, Bosco della Ficuzza, **1.** Holotype ♂, **2.** Paratype ♀. **3–4.** *C. ligula*, Central Italy, surroundings of Rome, **3.** ♂, **4.** ♀. **5–6.** *C. vaccinii*, Central Italy, Latium, ♀. **7.** *C. alicia* ♀, Algeria, Algier (syntype of *Orrhodia vaccinii* v. *nigra* A. Bang-Haas, 1907). **8.** Idem, Morocco, Ifrane, ♂.

Conistra vaccinii (Linnaeus, 1761) Figs. 5–6

Diagnosis. Antennal segments of male approximately square with straight basal and distal margins in side view, so as to appear as tightly adpressed in a 'continuous' flagellum. Forewing with apex little or not produced, due to termen almost regularly straight or

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convex subapically, submarginal shade on underside distinctly lobed with indentations in correspondence with veins (Fig. 11); hindwing and abdomen comparatively pale, the former often showing postmedial line; valvae moderately asymmetrical in length (the right longer) with smooth costal angles, juxta inferiorly anchor-shaped with nearly rectangular inner angles and rather narrow superior plate, vesica with bulbous and apically blunt basal cornutus, median bundle with 7–27 small cornuti (Figs. 14, 18a–c, 21a–c, 26a–d); antrum short and narrow, with narrow and tapering posterolateral lobes, bursa with two small elongate signa, sclerotisation of cervix bursae little extended (Figs. 30, 35a–e).

Remarks. The species is remarkably variable in colour, although most often orange brown or reddish brown; blackish specimens are extremely rare (cf. Steiner 1997: 466). As specimens with slightly produced forewing apex are not uncommon, the best diagnostic character in external habitus with respect to *C. ligula* is represented by features of the submarginal shade on the forewing underside. Asymmetry in the length of valvae has not been generally noted in the literature, but this is fairly frequent, although to a variable extent, and most emphasized in populations from peninsular Italy (e.g. the ratios of lengths left/right valva varied in our sample between 0.88–0.93). The bundle of median cornuti is generally stated as being not numerous, but a lot of variation has been found both in the number and size of these cornuti. As a matter of fact, the medians of the distributions of these cornuti do not significantly differ between *C. vaccinii* (N=20) and *C. ligula* (N=13) ($U = 125$; $P < 0.05$). It should not be underestimated, however, that these cornuti are likely to detach during copula (cf. Ronkay et al. 2001: 111, under *C. alicia*) and statistical comparisons should be better performed with bred unmated males.

Distribution. Palaearctic, from western Europe to the Russian Far East (Amur), as far south as southern Europe, Turkey, Iran and Turkestan. Records from China (Chen 1999) seem ascribable to other taxa. We have been unable to identify any authentic specimen from Northwest Africa, where the species is stated to occur (Ronkay et al. 2001). Not known from Sicily, despite some quotations from this island.

Conistra ligula (Esper, 1791) Figs. 3–4

Diagnosis. Antennal segments of male approximately rectangular (longer than wide) with straight basal and distal margins in side view, so as to appear as tightly adpressed in a 'continuous' flagellum. Forewing with apex often distinctly produced because termen is slightly concave subapically, submarginal shade on underside straight or irregularly festooned (Fig. 10); hindwing more uniformly smoky, rarely showing postmedial line, abdomen dark; valvae asymmetrical in length (the right longer) with smooth costal angles, juxta generally deltoidal inferiorly with broader superior plate than in *C. vaccinii* (but see remarks here below), vesica with slender and sharply pointed basal cornutus, median bundle of cornuti 5–43 (Figs. 15, 19a–c, 23a–c, 24c 28a–b); antrum long and wide, with large and apically rounded posterolateral lobes, bursa with 0–1 small elongate signum (see remarks below), sclerotisation of cervix bursae moderately extended (Figs. 31–32, 37a–e).

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Figs. 9–12. Ventral side of *Conistra* spp. **9.** *C. iana* sp. n. ♂, Sicily, Bosco della Ficuzza (paratype). **10.** *C. ligula* ♂, Switzerland, Magden. **11.** *C. vaccinii* ♀, Central Italy, surroundings of Rome. **12.** *C. alicia* ♂, France, Pyrénées-Orientales, Vernet-les-Bains (syntype).

Remarks. Colour variation is less than in *C. vaccinii* and most individuals are either deep reddish brown or blackish brown, both equally frequent. As shown above under *C. vaccinii*, the well-known character of the falcate forewing apex is not of absolute value for diagnosis. Whereas on the one hand specimens of *C. vaccinii* with slightly falcate apex may occur, on the other hand some of *C. ligula* may indeed show a fairly

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regular forewing termen, although they appear to be rare (cf. Fig. 4, specimen checked through dissection). Some characters of the genitalia usually considered as constant are very variable and alike *C. vaccinii*. Of these it is worth mentioning the shape of the juxta, which is occasionally anchor-shaped with inner angles nearly rectangular and rather narrow apical plate (this configuration was found in three Bulgarian examples out of eight together with two intermediates and the more usual form; Figs. 24a–b) and the number and size of median cornuti. Nevertheless, also specimens with a "vaccinioid" juxta tend to show a taller inferior plate and straighter inferior margins than *C. vaccinii*. Moreover, a surprising outcome was the finding that all the females dissected from Peninsular Italy (8♀), Sicily (1♀), Bulgaria (3♀), Greece (1♀) and Turkey (1♀) are devoid of any signum (Fig. 32), while the presence of one signum was considered as a fixed character for *C. ligula* in all the consulted references. It is worth noting that also the female from Hungary illustrated by Ronkay et al. (2001) appears devoid of the signum. This outcome shows a clear geographical congruence and calls for further research in order to assess whether or not more entities are involved into the current concept of *C. ligula*. For the time being we prefer to take a conservative view and consider the expression of the signum in *C. ligula* from the North-West to the South-East to be clinal (cf. Grassi & Zilli, 2005b). As a matter of fact, the existence of a NW–SE cline in Europe, or a corresponding contact between closely related sister taxa, seems to be quite common among European Lepidoptera, some examples from the Noctuidae being *Hadena bicruris* (Hufnagel, 1766) / *H. capsincola* ([Denis & Schiffermüller], 1775), *Shargacucullia caninae* (Rambur, 1833) / *S. blattariae* (Esper, 1790), *Spudaea ruticilla* (Esper, 1791) / *S. pontica* Klyuchko, 1968 and *Agrochola pistacinoides* (d'Aubuisson, 1867) / *A. nitida* ([Denis & Schiffermüller], 1775) (cf. Ronkay & Ronkay 1994; Ronkay et al. 2001; Hacker et al. 2002).

Distribution. Western-Palaearctic, from western Europe and Northwest Africa to the Urals, Caucasian region, Iraq and Iran. Records from China (Chen, 1999) seem ascribable to other taxa. Old records from Siberia have been subsequently amended (Kononenko, 2005). Present in Sicily.

Conistra alicia Lajonquière, 1939 — Figs. 7–8

Diagnosis. Antennal segments of male approximately rectangular (wider than long) with sligthly concave basal and distal margins in side view, so as to give the flagellum a more 'articulated' appearance. Forewing a little more elongate than in closest congeners, apex of forewing as in *C. vaccinii*, submarginal shade on forewing underside straight (Fig. 12); hindwing generally less smoky than in *C. ligula*, with variable expression of postmedial line, abdomen comparatively pale; valvae moderately asymmetrical in length (the right longer) with slightly produced costal angles; juxta basally rhomboidal; vesica with bulbous and feebly apically blunt basal cornutus, median bundle of cornuti numerous (approx. 20–50), cornuti more thread-like (Figs. 16, 20a–c, 25a–c, 28c–d); antrum moderately elongate and wide, with very large and well-rounded posterolateral lobes, bursa with one small circular signum, sclerotisation of cervix bursae greatly extended (Figs. 33, 38a–c).

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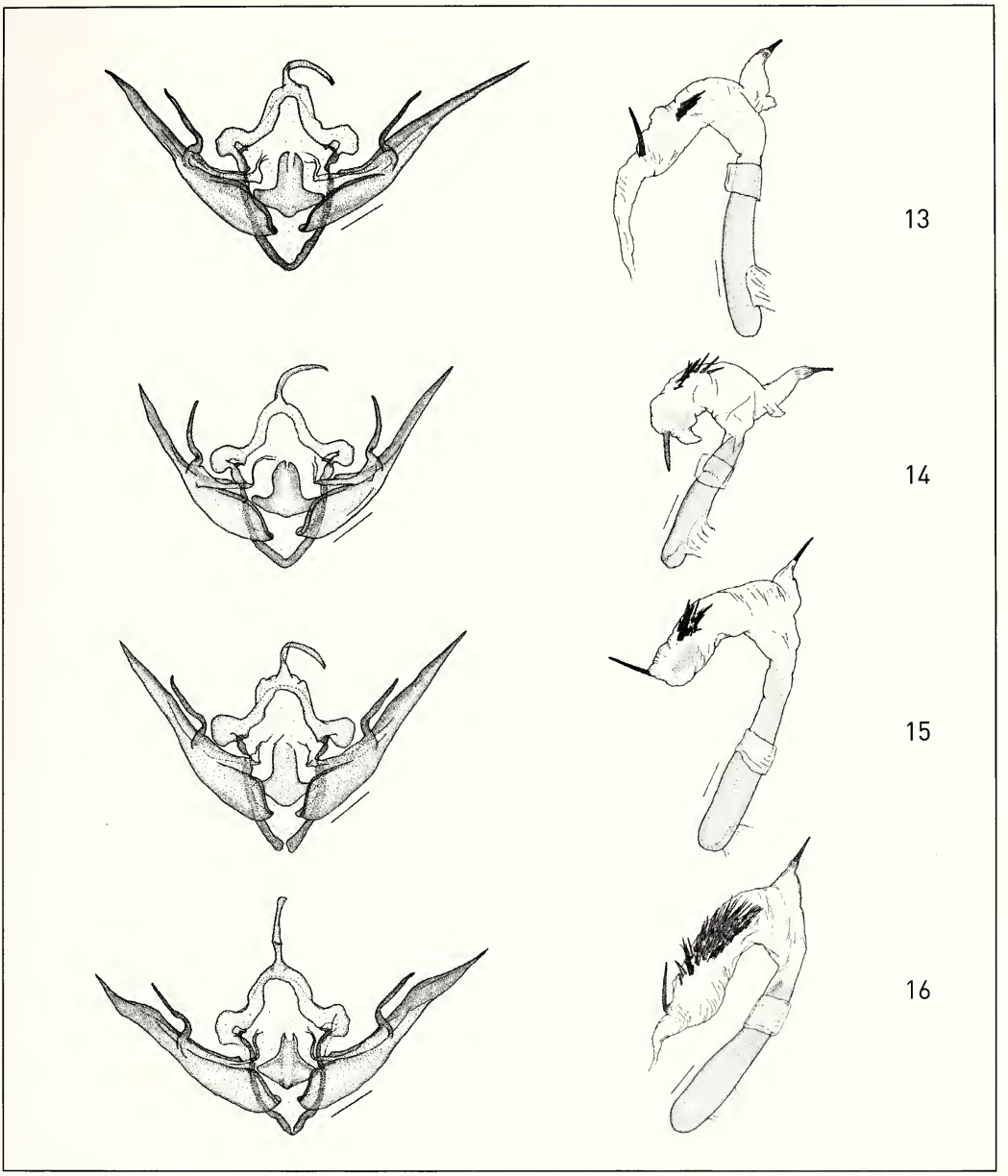

Figs. 13–16. ♂ genitalia of *Conistra* spp. **13.** *C. iana* sp. n., Sicily, Bosco della Ficuzza (paratype). **14.** *C. vaccinii*, Switzerland, Mte Ceneri. **15.** *C. ligula*, Central Italy, surroundings of Rome. **16.** *C. alicia*, Algeria, Algier. Scale bars = 1 mm.

Remarks. Variation occurs in the length of the basal bulbous cornutus and number of median cornuti. In the light of the slender and apically sharp basal cornutus and too scanty bundle of median cornuti we are unable to confirm the identification of the aedeagus of "*C. alicia*" illustrated by Ronkay et al. (2001) as belonging to this species and suggest that a mistake for *C. ligula* might have occurred. Some females

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show a signum not perfectly circular, but never as elongate as in closest congeners. A few females from Southern Spain and Morocco are characterised by the unusually large and rounded posterolateral lobes of the antrum (Figs. 34, 38d–e), alongside with normal females occurring in the same areas, so that also in this case further research is necessary to assess whether or not the current concept of *C. alicia* has to be split.
Distribution. Atlanto-Mediterranean. Not known from Sicily.

***Conistra iana* sp. n.** **Figs. 1–2**

Material. Holotype ♂, **Italy**, Sicily, Palermo Province, Bosco della Ficuzza, 'Alpe Cucco', 1050 m, 16.xi.1990, Zilli leg., MZR. – Paratypes: 15♂, 14♀, same data as holotype; 9♂, 17♀, idem, but 'Crocifisso', 1000 m, 22.xi.1990; in AG, AZ, HNHM, MF, MHNG, MZR; 1♂, idem, [no site stated], 2.xii.1995, Grillo leg., in AZ; 2♂, idem, 'torrente', 730 m, 24.xi.1991, Pantini & Valle leg., MNHB. – Additional material. 1♀, Sicily, Etna, Linguaglossa, Contrada Salici 13.iii.1994, Bella & Russo leg., in PP; 1♀, Sicily, Etna, Pineta di Linguaglossa, 'Etna Nord', 1450 m, 5.iv.1989, Grillo leg., in AZ.

Description. Male (Fig. 1). Wingspan 32.50–37.50 mm (x = 34.82, N = 28). Specimens falling into two main categories as to colour of background, dark reddish brown or blackish brown, occasionally pale orange-brown, pattern elements as in close congeners, generally little outstanding but conspicuous in rare contrasted specimens mottled by pale yellowish. Antennal segments approximately square, as in *C. vaccinii*. Forewing with apex distinctly pointed and produced, the termen being subapically concave much as in *C. ligula*, cilia concolorous with ground colour; hindwing glossy, pale basally and irregularly suffused by brown, with fairly evident postmedial and submarginal lines, the latter often followed by some clearing before dark terminal line, cilia pale creamy brown. Abdomen fairly dull coloured. Underside very clear and contrasted, with prominent postmedial lines and discal spot of hindwing, submarginal shade of forewing distinctly lobed with indentations in correspondence with veins (Fig. 9).
Male genitalia (Figs. 13, 17a–c, 22a–c, 27a–d). Armature as in *C. vaccinii* except for valvae, greatly asymmetric in length, right one remarkably longer than left one and often tapering into rod-like point. Aedeagus vesica with very short bulbous and apically blunt basal cornutus, bundle of 9–18 small median cornuti and distal cornutus.
Female (Fig. 2). Wingspan 32–37 mm (x = 34.74, N = 33). Habitus essentially as described for male.
Female genitalia (Figs. 29, 36a–e). Armature as in *C. vaccinii* except for antrum, longer and broader than in *C. vaccinii* but distinctly shorter than in *C. ligula*, with narrow and pointed posterolateral lobes, and with only one elongate signum.
Derivatio nominis. The species is named after the 'two-faced' Roman god Ianus, in order to emphasise the twofold facies of the forewing, more closely resembling that of *C. ligula* on the upperside because of dark colour and falcate apex, and of *C. vaccinii* on the underside because of lobed submarginal shade.
Distribution. So far known from Sicily.
Diagnosis. The new species is essentially characterised by a combination of features that separately occur in *C. vaccinii* and *C. ligula*. It shows the habitus of *C. ligula*, particularly in the slightly falcate apex of forewing, and the same tendency to occur

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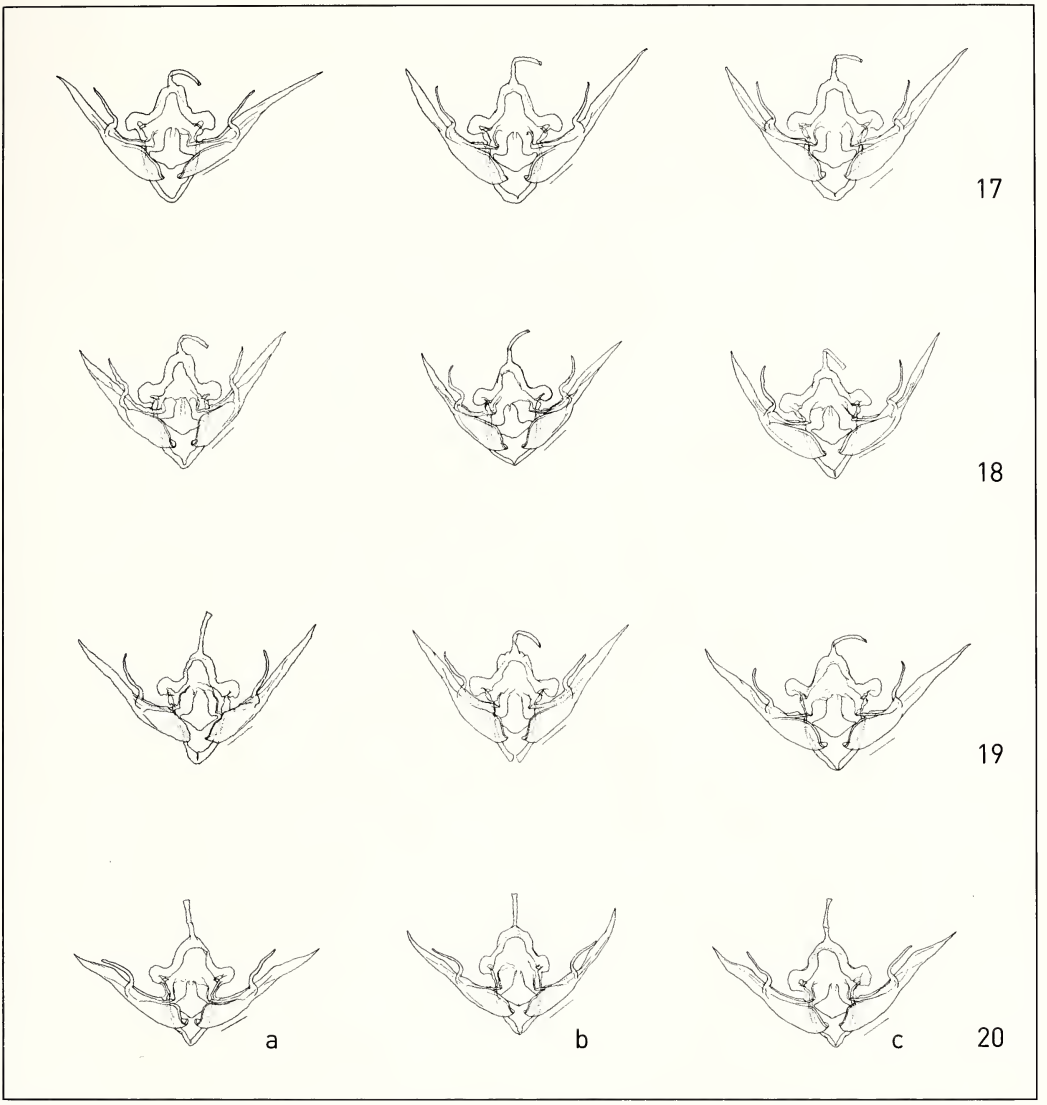

Figs. 17–20. ♂ genital armatures of *Conistra* spp. **17a–c.** *C. iana* sp. n., Sicily, Bosco della Ficuzza (paratypes). **18a–c.** *C. vaccinii*: (a) Finland, Maarianhamina, (b) Czech Republic, Borek, (c) Southern Italy, Calabria, Domanico. **19a–c.** *C. ligula*: (a) Switzerland, Magden, (b) Central Italy, surroundings of Rome, (c) Southern Italy, Calabria, Donnici. **20a–c.** *C. alicia*: (a) Spain, Guadalajara, Trillo, (b) Morocco, Middle Atlas, Ifrane, (c) Algeria, Algier. Scale bars = 1 mm.

with dark phenotypes, either reddish brown or blackish brown (with around same frequency), but on the forewing underside the submarginal shade is distinctly lobed and indented in correspondence with veins, not straight as in *C. ligula* (and *C. alicia*). In the male genitalia, the shape of the juxta and the blunt apex of the basal bulbous cornutus correspond with *C. vaccinii*, the cornutus being sharp and not bulbous in *C. ligula*; on the other hand, in the female genitalia the presence of only one elongate signum corresponds with *C. ligula*, as *C. vaccinii* has two such signa. Features exclusive of

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C. iana sp. n. are a greatly emphasized asymmetry in length between the valvae, the right one being extraordinarily elongate, the shortness of the basal bulbous cornutus, and the antrum clearly intermediate in size between those of *C. vaccinii* and *C. ligula*. Concerning the basal cornutus, the ranges of variation of *C. vaccinii* and *C. iana* sp. n. slightly overlap, but the differences are greatly statistically significant (P = 0.01): for *C. vaccinii* $0.72 \leq L \leq 0.92$, x = 0.86, s = 0.059 (N = 27); for *C. iana* $0.56 \leq L \leq 0.73$, x= 0.65, s = 0.068 (N = 8), with $t(vaccinii\text{-}iana) = 21.23$. As regards the length of the antrum, the differences are also greatly statistically significant (P = 0.01) between the three species: for *C. vaccinii* $0.90 \leq L \leq 1.22$, x = 1.10, s = 0.086 (N = 13); for *C. iana* $1.22 \leq L \leq 1.52$, x = 1.36, s = 0.106 (N = 10); for *C. ligula* $1.70 \leq L \leq 2.28$, x = 1.95, s = 0.166 (N = 18); with $t(vaccinii\text{-}iana) = 15.55$, $t(vaccinii\text{-}ligula) = 46.56$ and $t(iana\text{-}ligula) = 25.76$.
With regard to *C. alicia*, the new species can be separated by the forewing shape more like that of *C. ligula*, submarginal shade on forewing underside lobed, valvae very asymmetrical in length with smooth costal angle, juxta inferiorly anchor-shaped, smaller number of median cornuti, smaller antrum with narrow and tapering posterolateral lobes, less extended sclerotisation of cervix bursae, signum elongate instead than circular.

Remarks. Interestingly, *Conistra alicia* is commonly stated to be intermediate between *C. vaccinii* and *C. ligula* (e.g. Boursin & Lajonquière 1943), but the features of *C. iana* sp. n. clearly show the Sicilian species to be the truly intermediate between the two. In fact, some qualitative characters fully match those of *C. vaccinii* (e.g. lobed subterminal shade, bulbous and blunt basal cornutus), some those of *C. ligula* (e.g. colour, falcate forewing apex, presence of only one elongate signum), and some quantitative ones are intermediate (e.g. length of antrum). A few quantitative traits are eccentric, such as the shortness of the basal cornutus and the great asymmetry in the length of valvae, but the latter feature occurs at a certain extent also in *C. vaccinii* (particularly from the Italian Peninsula) and *C. ligula*. This situation may be *a priori* ascribable either to *C. iana* being basal to both *C. vaccinii* and *C. ligula* or an hybridogenic origin of the Sicilian species. Even if the second hypothesis appears as more parsimonious, the frequency of archaic elements showing relic distribution and most derived ones being widespread gives some support also to the first scenario. The facts that only *C. iana* and *C. ligula* are present with certainty in Sicily, and *C. vaccinii* and *C. ligula* in southernmost Italian Peninsula (Calabria), are compatible with both hypotheses. Nevertheless, whitin the context engendered by presuming that *C. iana* is ancestral, the loss of the signum in southeastern populations of *C. ligula* (including Sicilian ones) and its acquisition in northwestern ones would represent an unlikely reversal of character toward the condition shown by *C. iana*, so we are inclined to provisionally dismiss this hypothesis. Nevertheless, we clearly recognise that such a rejection is based on the assumption that by virtue of their geographic proximity *C. iana* should be more related to the *C. ligula* populations without signum than those with signum. In contrast, should the settlement of signum-devoided *C. ligula* in Peninsular Italy and Sicily be a secondary one, e.g. following a spread from the Balkan Peninsula, the sharing of the signum between *C. iana* and northwestern *C. ligula* might well be symplesiomorphic. On this respect, it is worth noting that there are other examples of characters shared between Sicilian and northern populations which are missing in those from the Italian Peninsula (cf. Zilli

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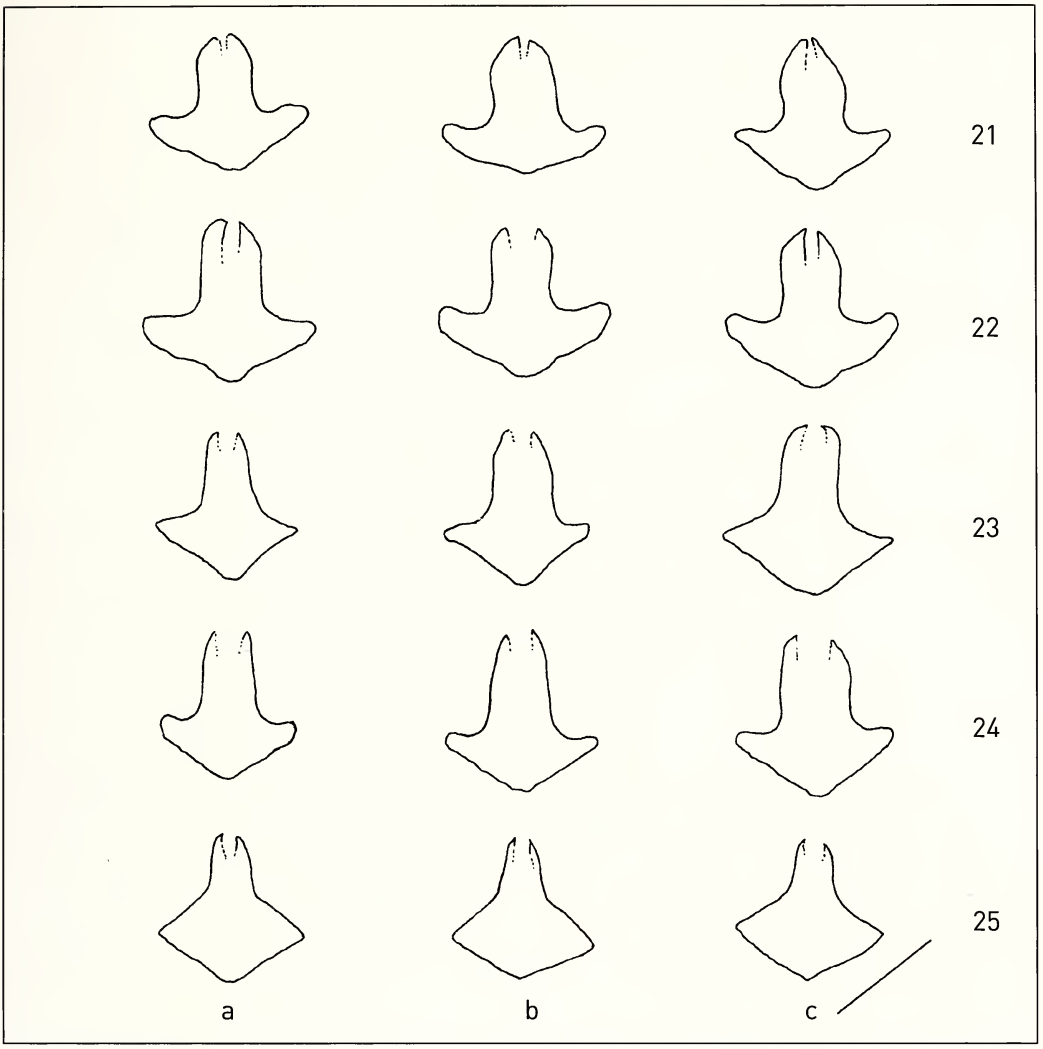

Figs. 21–25. Juxtae of *Conistra* spp. **21a–c.** *C. vaccinii*: (a) Czech Republic, Borek, (b) Switzerland, Mt Ceneri, (c) Southern Italy, Calabria, Domanico. **22a–c.** *C. iana* sp. n., Sicily, Bosco della Ficuzza (paratypes). **23a–c.** *C. ligula*: (a) The Netherlands, Utrecht, (b) Switzerland, Magden, (c) Southern Italy, Calabria, Donnici. **24a–c.** Idem: (a) Bulgaria, Kozuch, (b) idem, (c) Central Italy, Rome. **25a–c.** *C. alicia*: (a) Spain, Guadalajara, Trillo, (b) Morocco, Middle Atlas, Ifrane, (c) Algeria, Algier. Scale bar = 1 mm.

1996). A clear resolution of the phylogeny of this group of species will therefore largely depend on the assessment of the phylogeographic relationships between the various populations of "*C. ligula*".

Nomenclatural aspects

While checking whether or not there were available species-group names of *Conistra* corresponding with the concept of the new Sicilian species, the following ones based on Northwest-African material had to be taken into account and are here discussed.

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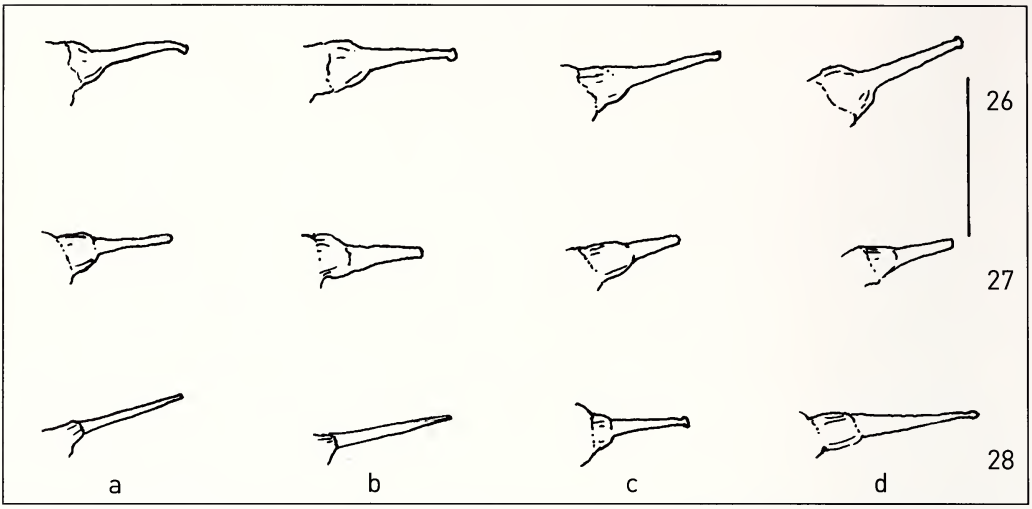

Figs. 26–28. Basal cornuti of *Conistra* spp. **26a–d.** *C. vaccinii*: (a) Finland, Koski, (b) Switzerland, Mt Ceneri, (c) Southern Italy, Calabria, Domanico, (d) idem, Mt Cocuzzo. **27a–d.** *C. iana* sp. n., Sicily, Bosco della Ficuzza (paratypes). **28a–b.** *C. ligula*: (a) The Netherlands, Utrecht, (b) Southern Italy, Calabria, Donnici. **28c–d.** *C. alicia*: (c) Spain, Guadalajara, Trillo, (d) Algeria, Algier. Scale bar = 1 mm.

Orrhodia sebdouensis Austaut, 1880: 221. Type-locality: Algérie, Sebdou.

Despite the clear association by Austaut (1880) of his "*Orrhodia sebdouensis*" with species of the subgenus *Dasycampa* Guenée, 1837 of *Conistra*, this name, representing a full synonym or a subspecies of *C.* (*D.*) *staudingeri* (de Graslin, 1863) (cf. Lajonquière & Boursin 1943; Rungs 1972, 1981; Poole 1989; Ronkay et al. 2001), began to be associated with *C. vaccinii* (e.g. Staudinger & Rebel 1901; Hampson 1906; Lucas 1911; Warren 1911, in 1909–1914; Rothschild 1920). Oberthür (1918), moreover, mixed two species in his illustrations of "*Cerastis sebdouensis*", as also evidenced by Lajonquière & Boursin (1943), viz. Figs. 4091 (*sebdouensis* type) and 4092 represent *C. (D.) staudingeri*, while figs. 4093–4104 actually relate to *C. alicia*.

Orrhodia vaccinii nigra Bang-Haas, 1907: 74. Type-locality: Algier.

The dissection of the two female syntypes of *nigra* (Figs. 7, 38b) by courtesy of the Museum für Naturkunde, Berlin, enables us to fully confirm the opinion of Lajonquière & Boursin (1943) that this name relates to the current concept of *C. alicia*, a view overlooked by Poole (1989), who wrongly put it into the synonymy of *C. vaccinii*. Nevertheless, Boursin (in Lajonquière & Boursin 1943: 177) explicitly did not want to grant a 'variety' with subspecific status and described *Conistra alicia barbarica* Boursin, 1943 with reference to the North African populations. Of course, had *nigra* been considered as an available species-group name, as in fact it is (cf. Bang-Haas, 1907: "*Orrhodia vaccinii* v. *nigra* n. var."), it would have taken full priority over *C. alicia*. We are therefore compelled to fully explicit the synonymy *Orrhodia vaccinii nigra* Bang-Haas, 1907 = *Conistra* (*Orrhodia*) *alicia* Lajonquière, 1939 **syn. n.**, but

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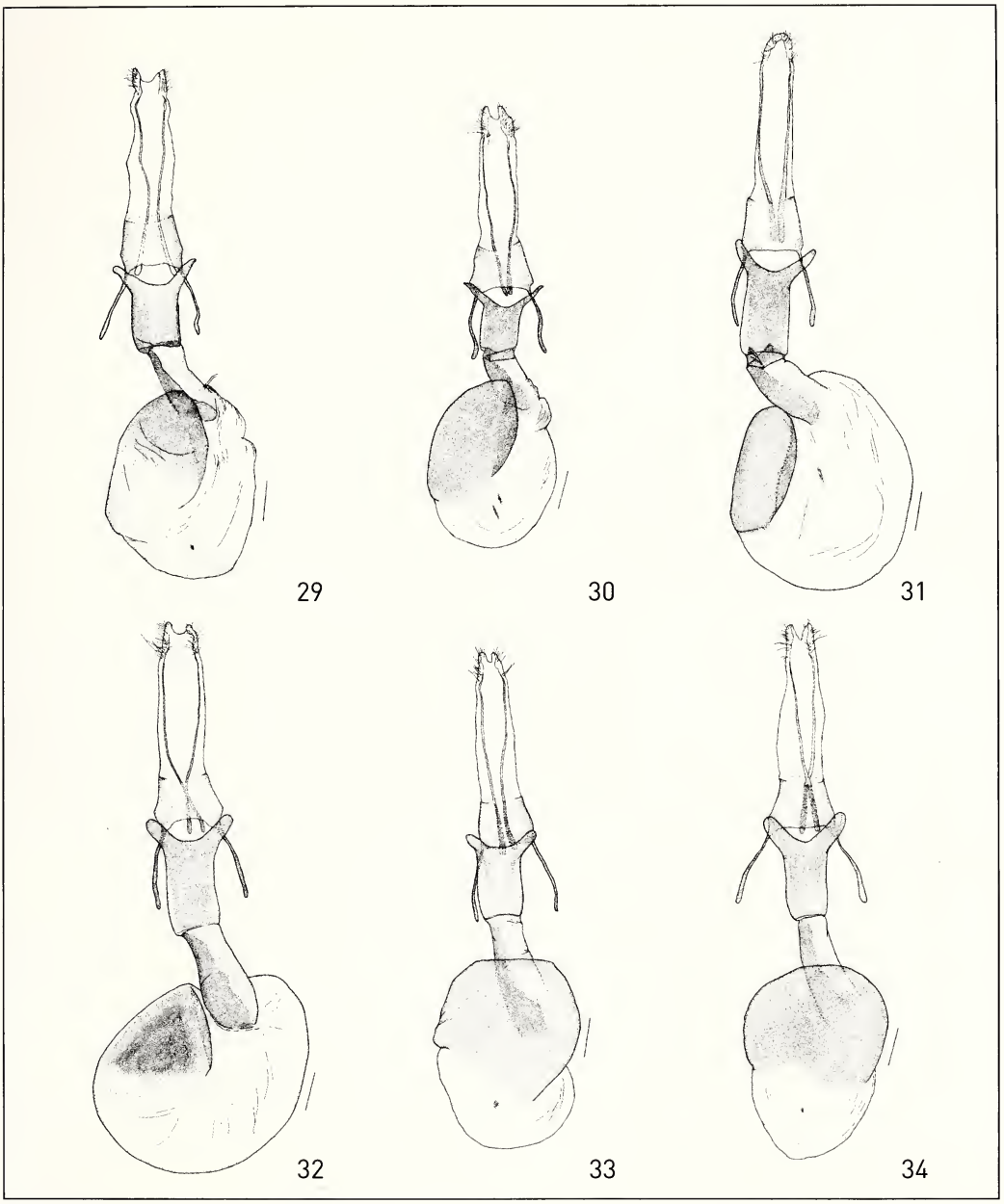

Figs. 29–34. ♀ genitalia of *Conistra* spp. **29.** *C. iana* sp. n., Sicily, Bosco della Ficuzza (paratype). **30.** *C. vaccinii*, Czech Republic, Černošice. **31.** *C. ligula*, Spain, Guadalajara, Trillo. **32.** idem, Southern Italy, Calabria, Scuotrapiti (without signum). **33.** *C. alicia*, Tunesia, Tunis. **34.** "*C. alicia*", Morocco, Agadir (with dilated lobes of antrum). Scale bars = 1 mm.

also to consider the younger name as *nomen protectum* and the older as *nomen oblitum* as the conditions of both articles 23.9.1.1. and 23.9.1.2. of the ICZN (1999) are fully met. Evidence for this is as follows (full references omitted inasmuch not compulsory by provisions of the Code):

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To our knowledge the name *nigra* Bang-Haas has not been used as a valid name since its publication, but only as infrasubspecific (Warren 1911; Boursin & Lajonquière 1943; Berio 1985) or was listed in publications not to be taken into account in determining usage such as catalogues or synonymy lists (e.g. Poole 1989; Vives Moreno 1994), as ruled by art. 23.9.6. (ICZN 1999). The junior synonym *C. alicia* has been used as presumed valid name for the taxon in more than 25 works published by more than 10 authors since 1956 over a span of more than 10 years, among the others Agenjo (1958), Mouterde & Dufay (1959), Dufay (1961, 1962, 1966), Rungs (1972, 1981), Calle, Yela & Motta (1974), Calle & López (1974), Gómez de Aizpúrua (1974, 1987), Gomez Bustillo, Arrojo Varela & Yela Garcia (1979), Laever (1979), Calle (1980, 1983), Garcia, Perez de Gregorio & Romaña (1984), Berio (1985), Requena (1987), Yela (1987, 1992), Yela, Olano & Marcos (1988), Hreblay (1992), Redondo (1990), Yela & Herrera (1993), Beck (1999–2000), Calle, Lencina, González & Ortiz (2000), Cifuentes (2000) and Redondo, Blasco-Zumeta & King (2001).

Orrhodia vaccinii nigra Lucas, 1911: 483. Type-locality: Algérie, Tarf.

Despite the fact that Lucas (1911) published this name relating to *C. alicia* (cf. Lajonquière & Boursin 1943) as "*Orrhodia vaccinii* var. *nigra*, nov.", the content of the article clearly reveals that *nigra* Lucas is infrasubspecific, as some other "formes" are stated to be sympatric in the type-locality. The name *nigra* Lucas, therefore, does not enter into zoological nomenclature and, had it entered, it would be a junior primary homonym and, at the same time, a junior subjective synonym of *Orrhodia vaccinii nigra* Bang-Haas, 1907.

Orrhodia vaccinii ab. *flavofasciata* Lucas, 1911: 483. Type-locality: Algérie, Tarf.

Explicitly described as aberrational and clearly intended as infrasubspecific in the text (Lucas 1911), the name *flavofasciata* Lucas relates to *C. alicia* but does not enter into zoological nomenclature.

Conistra alicia barbarica Boursin [in Lajonquière & Boursin], 1943: 178, pl. 10 figs. 9–12, pl. 11 figs. 7–18. Type-locality: Algérie, dept. Constantine, Le Tarf près la Calle.

In the light of the weak differences between African and European populations of *C. alicia*, Ronkay et al. (2001) synonymised *barbarica* Boursin, 1943 with nominotypical *C. alicia*.

Conistra ligula gemella Rungs, 1972: 680, pl. 1 fig. 15, pl. 3 [nec pl. 2] figs. 1, 5. Type-locality: Maroc, Moyen Atlas, Ifrane.

Judging from the original description (Rungs 1972) and examination of some specimens from Morocco there is no doubt that the name *gemella* relates to *C. ligula*, of which it is currently considered to represent a full synonym (Ronkay et al. 2001).

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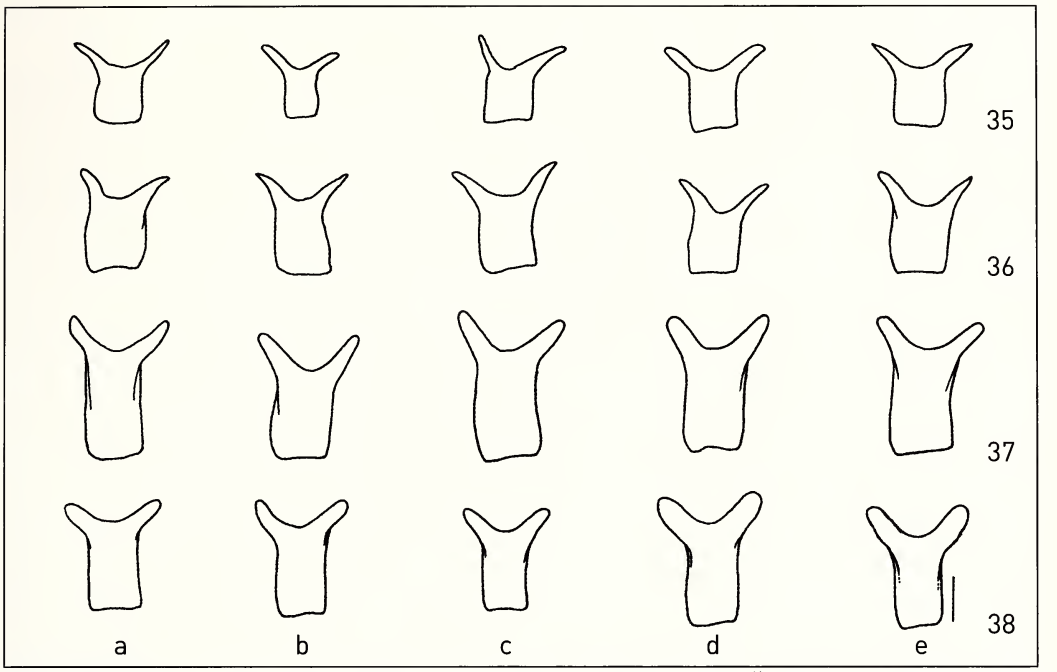

Figs. 35–38. Antra of *Conistra* spp. **35a–e.** *C. vaccinii*: (a) Czech Republic, Černošice; (b) Northern Italy, Trient, (c), Piedmont, Pralormo, (d, e) Central Italy, Latium, S. Severa. **36a–e.** *C. iana* sp. n.: (a–c) Sicily, Bosco della Ficuzza (paratypes), (d) Etna, north slope, (e) Linguaglossa. **37a–e.** *C. ligula*: (a) Spain, Guadalajara, Trillo, (b) France, Alpes-de-Haute-Provence, Digne, (c) Bulgaria, Kozuch, (d) Central Italy, surroundings of Rome, (e) Southern Italy, Calabria, Scuotrapiti [c–e from specimens without signum]. **38a–c.** *C. alicia*: (a) Morocco, Middle Atlas, Ifrane, (b) Algeria, Algier (syntype of *Orrhodia vaccinii* v. *nigra* A. Bang-Haas, 1907), (c) Tunesia, Tunis. **38d–e.** "*C. alicia*", with dilated lobes of antrum: (d) Morocco, Middle Atlas, Ifrane, (e) Agadir. Scale bar = 1 mm.

Conistra plantei Rungs, 1972: 681, pl. 1 fig. 16, pl. 3 figs. 2, 6. Type-locality: Maroc, Moyen Atlas, forêt de Jaba.

This little known species, known with certainty only on the male sex, is clearly distinct from the Sicilian one on account of the stouter valvae (Rungs states the left one to be longer, but probably the plate in his work is reversed of 180°, as also the specimen illustrated of *C. ligula gemella* shows a longer left valva), wider and stouter clasper, longer and thinner superior plate of juxta, less blunt basal bulbous cornutus and scarcer bundle of median cornuti.

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