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Ergebnisse des 2. Innsbrucker Lepidopterologengesprächs vom 4./5. Oktober 1980 zum Thema "Die purpuralis-Gruppe des Genus *Zygaena* Fabricius, 1775 (Subgenus *Mesembrynus* Hübner, [1819]) III. (Lepidoptera, Zygaenidae)

On the correct authors of two species-group taxa in the genus *Zygaena* Fabricius

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## Abstract

The correct authorship of two species-group taxa is established. It is considered that *Brünnich*, not *Pontoppidan*, is the author of the nominal taxon *Sphinx purpuralis*, which should therefore be formally cited as *Zygaena (Mesembrynus) purpuralis* (BRÜNNICH, 1763), and in synonymies as *Sphinx purpuralis* BRÜNNICH in *Pontoppidan*, 1763. It is also shown that the nominal taxon *Zygaena purpuralis* forma *pimpinellae* GUHN, [1931] is available as a species-group name, even although it was described as a form; the name should therefore be attributed to its original author, *Guhn*, [1931] and not to *Reiss*, 1940.

# Zusammenfassung

Die korrekte Autorschaft zweier Artgruppen-Taxa wird ermittelt. Es wird nachgewiesen, daß *Brünnich* und nicht *Pontoppidan* als Autor des nominellen Taxon *Sphinx purpuralis* zu gelten hat. Dieses Taxon sollte daher formal als *Zygaena (Mesembrynus) purpuralis* (BRÜNNICH, 1763) angeführt werden mit *Sphinx purpuralis* BRÜNNICH in *Pontoppidan*, 1763 als Synonym. Desweiteren wird gezeigt, daß das nominelle Taxon *Zygaena purpuralis* forma *pimpinellae* GUHN, [1931] als Artgruppenname verfügbar ist, obwohl er als Form beschrieben worden ist. Der Name sollte daher seinem ursprünglichen Autor *Guhn*, [1931] zugeschrieben werden und nicht *Reis*, 1940.

At present there are different opinions as to the correct authors of the nominal taxa *Sphinx purpuralis* and *Zygaena purpuralis* forma *pimpinellae*; in the following notes an attempt is made to clarify the situation.

*Zygaena (Mesembrynus) purpuralis* (BRÜNNICH, 1763)

*Sphinx purpuralis* BRÜNNICH in *Pontoppidan*, 1763:686, pl. 30, fig.

*Sphinx purpuralis* was named and illustrated in *Pontoppidan's* *Den Danske Atlas* (1763:686, pl. 30, fig.), with reference to *Brünnich* (1761:29) who had provided a detailed description in Latin without giving the moth a name. With the exception of *Karsholt & Nielsen* (1976) subsequent authors (including all *Zygaena* specialists) have attributed the name *purpuralis* to *Brünnich*, 1763. Such authors include *Aurivillius* (1889), *Tutt* (1899), *Rebel* (1901), *Sherborn* (1929), *Hoffmeyer & Knudsen* (1938), *Nordström & Wahlgren* (1941) and *Hoffmeyer* (1948;1958; 1960) and, of these, *Sherborn* (1929:5293) actually cited the author as *Brünnich* in *Pontoppidan*. *Karsholt & Nielsen* (1976:20, 74, 82) have attributed *Sphinx purpuralis* to *Pon-*

t o p p i d a n because they maintain that, of the three newly described species (*Papilio flava*, *Papilio acrion* and *Sphinx purpuralis*), only *Papilio flava* can be attributed to B r ü n n i c h. K a r s h o l t & N i e l s e n have arrived at this conclusion because of the statement immediately preceding the description of *Papilio flava* in P o n t o p p i d a n's work, which reads as follows: "Flava not known before and described by Mr B r ü n n i c h in this manner ....". A description is provided for *Papilio acrion* without any reference to B r ü n n i c h; for *Sphinx purpuralis* there is no description but a bibliographical reference to B r ü n n i c h (1761:29), which reads as follows: "Purpuralis described in Prodrum. Ins. Siaelland. p. 29, n. 18. and see here pl. XXX."

P o n t o p p i d a n's Den Danske Atlas consists of seven volumes and is a comprehensive description of Denmark; there is no doubt that B r ü n n i c h (and T e i l m a n) contributed substantially to the section on insects as P o n t o p p i d a n (1763:663) recorded "For the largest part I have to thank one of our most distinguished naturalists M.T. B r ü n n i c h, who possesses a large collection ....". B r ü n n i c h (1783a: 89) stated that P o n t o p p i d a n "... is also the author of many volumes of the Atlas Danica, in the first volume of which he mentioned Messrs F l e i s c h e r, T e i l m a n, A b i l d g a a r d and other scholars, who have contributed to the part of this work which includes the natural history of Denmark.". It is of interest to note that P o n t o p p i d a n was Professor of Theology at the University of Copenhagen (B r ü n n i c h, 1783b:149), while B r ü n n i c h was Professor of Natural History at the same university (B r ü n n i c h, 1783b:188). S t r ø m (1866:109) refers to "B r ü n n i c h's little list (80 species) in P o n t o p p i d a n's Danske Atlas", and K l ö c k e r (1909:208), in a paper summarizing the early lists of Danish *Lepidoptera*, considered B r ü n n i c h to be the author in P o n t o p p i d a n's work. H o r n & S c h e n k l i n g (1928:952) considered that the new descriptions were by B r ü n n i c h, and it is signi-

ficant that S h e r b o r n (1929), who was a thorough and painstaking bibliographer, should have attributed the name *Sphinx purpuralis* to B r ü n n i c h in P o n t o p p i d a n. Furthermore, B r ü n n i c h must have been ultimately responsible for the production of pls 29 and 30 in P o n t o p p i d a n's work, the originals of which were apparently drawn by a relative as they bear the caption "ad naturam delin. P. B r ü n n i c h e,"; *Sphinx purpuralis* is illustrated and named as such on pl. 30. According to H o f f m e y e r (1958: 198) the type-specimens of *Sphinx purpuralis* were in B r ü n n i c h's collection but this was destroyed following the bombardment of Copenhagen by N e l s o n in 1801.

To attribute the name of two species to P o n t o p p i d a n and one to B r ü n n i c h, as K a r s h o l t & N i e l s e n have done, is undesirable as it is based largely on surmise and does not warrant the disruption of a stable usage of more than 100 years, i.e., since the publication of S t r ø m's paper in 1866. I am aware that T e i l m a n also contributed to the section on insects but the fact that B r ü n n i c h was largely responsible, and that his 1761 description was referred to in the absence of a description, are in my opinion sufficient to justify recognition of him as an author. In the interest of stability, the name *Sphinx purpuralis* should be attributed to B r ü n n i c h, 1763, in P o n t o p p i d a n.

*Zygaena (Mesembrynus) minos pimpinellae* GUHN, [1931]

*Zygaena purpuralis* BRÜNNICH forma *pimpinellae* GUHN, [1931]:89.

*Zygaena pimpinellae* GUHN; R e i s s, 1940:4 [raised to species].

The nominal taxon *pimpinellae* was described by G u h n ([1931]:89) as a form of *Zygaena purpuralis* (BRÜNNICH, 1763) but was subsequently raised to species level by R e i s s (1940:4). T r e m e w a n (1960:207) attributed the species-group name *pimpinellae* to R e i s s (1940) on the erroneous assumption that *pimpinellae* GUHN,

[1931], was unavailable, as it had been described as a form. Re i s s & T r e m e w a n (1967:40) also attributed the name *pimpinellae* to Re i s s (1940) and placed *pimpinellae* GUHN (erroneously dated 1932, see below) in synonymy as an infrasubspecific name.

Apart from indiscriminately citing geographical races as subspecies, varieties and forms, G u h n also uses the last term to denote individual forms or aberrations. A more critical examination of G u h n's original description ([1931]:89-90) reveals that the name *pimpinellae* GUHN, although described as a "forma", is in fact available. In his description he compares it with *Zygaena purpuralis*, describes the larva, cites the host plant, *Pimpinella nigra*, and the type-locality, Rüdersdorf. In introductory matter before the description G u h n ([1931]:88) states that *Zygaena purpuralis* undoubtedly and regularly occurs as two parallel races, the typical race having "lemon-yellow" larvae which feed on *Thymus serpyllum*, the other (*pimpinellae*) with dirty grey larvae which feed on *Pimpinella nigra*. The fact that *pimpinellae* is differentiated as a population rather than an individual form renders the name nomenclaturally available.

The correct date of publication of the name *pimpinellae* GUHN is 1931. Volume 41 of the Entomologisches Jahrbuch is for the year 1932, this date also being cited on the title page. However, it was distributed in 1931 as the copy in the Entomology Library of the British Museum (Natural History), London, bears the purchase stamp "21 OCT 1931". All the nominal taxa described therein by G u h n should be dated [1931], and the date should be placed in square brackets as it has been ascertained from external evidence (Recommendation 22A(3) of the International Code of Zoological Nomenclature).

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