Comment on the proposed precedence of *Maculinea* van Eecke, 1915 over *Phengaris* Doherty, 1891 (Lepidoptera, LYCAENIDAE)
(Case 3508; see BZN **67**: 129–132)

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This comment rejects the proposal of Case 3508, requesting the Commission to use its plenary power to rule the precedence of *Maculinea* van Eecke, 1915, over *Phengaris* Doherty, 1891, in order to stabilise zoological nomenclature. We suggest that such an act would not serve this purpose but would, indeed, be likely to produce the opposite effect.

(1) *Maculinea* was synonymised with *Phengaris* by Fric et al. (2007); the very close relationship of Asiatic *Phengaris* and palaearctic *Maculinea* was shown earlier by Als et al. (2004) and Pech et al. (2004). The main purpose for the precedence of *Maculinea* over *Phengaris* is, according to Balletto et al. (BZN **67**: 129–136), the prevention of nomenclatural confusion in view of the importance of *Maculinea* species; because they serve as model organisms of obligatory myrmecophily and because of the inclusion of the genus *Maculinea* in European legislature.

(2) Balleto et al. claim that the name *Maculinea* van Eecke, 1915, has been universally used for the European and Asiatic 'Large Blue' butterflies for almost a century and that it is involved in the 'old and the recent scientific literature alike, as well as [in] all standard reference books on European butterflies (Higgins & Riley, 1970; Tolman & Lewington, 1997, Asher et al. 2001, etc.)'. We have to reject such a statement. We consider that the use of *Maculinea* has not been stable during the last century as claimed in Case 3508. Furthermore, two of the 'standard reference books' cited above are field guides and the third is a distribution atlas of British butterflies, none of these publications being of taxonomic or major scientific importance. During

the last 100 years or so we observe the use of three different generic names for the same species, subsequently placed by Fric et al. (2007) in the genus *Phengaris*. In fact the confusion in zoological nomenclature originated from the erection of the genus *Maculinea* by van Eecke (1915) in his study on West European species of the family LYCAENIDAE. He included in the genus the following species: *Papilio alcon* [Schiffermüller, 1775], *P. euphemus* Hübner, 1800 (= *P. teleius* Bergsträsser, 1779), *P. arion* Linnaeus, 1758 and *P. arcas* Rottemburg, 1775 (= *P. nausithous* Bergsträsser, 1779), as well as *P. cyllarus* Rottemburg, 1775 (= *P. alexis* Poda, 1761) and *Polyommatus melanops* Boisduval, 1829. It is evident that van Eecke was not aware of the existence of the genus *Glaucopsyche* Scudder, 1872, nor of the genus *Phengaris* Doherty, 1891. Van Eecke also ignored a paper by Bethune-Baker (1914), who mentioned the relations of *Glaucopsyche* Scudder, 1872 (*P. alexis* was already placed in *Glaucopsyche*). It took a few decades before *Maculinea* was, by and large, accepted by lepidopterists as a genus. The exceptions were rare. Hemming (1934) noted that *Argus* Boisduval, 1832, proposed for *P. alcon*, is invalid, being a junior homonym of *Argus* Bohadsch, 1761, and thus cannot take precedence over *Maculinea*. However, a vast majority of lepidopterists assigned all species concerned to the genus *Lycaena* Fabricius, 1807, e.g. Seitz (1908–1909 and 1929–1932, apparently following Spuler, 1901–1908) and Rebel (1910). Forster (1938) treated *Maculinea* as a subgenus of *Glaucopsyche*. However, Verity (1943) and Forster & Wohlfahrt (1952–1955) treated *Maculinea* as a distinct genus. Since then, the name *Maculinea* has generally been adopted, although in some areas the use of *Lycaena* endured much longer (e.g. Bergmann, 1952; Kurentzov, 1970). Some 15 years ago Nässig (1995) synonymised *Maculinea* with *Glaucopsyche* and his treatment was used in at least some books (Hesselbarth et al., 1995; Settele et al., 2000) and papers (Pauler-Fürste et al., 1996; Pfeifer et al., 2000). Finally, Settele et al. (2009) used *Phengaris* for the European species in the new edition of their book.

(3) We do not question the importance of *Maculinea* species as model organisms for studies of the origin and evolution of parasitic interactions and of host-parasite communication channels. Nonetheless there are numerous model organisms, many of which have changed generic names as it became necessary. One famous example used by Tinbergen (Tinbergen et al., 1942) was known as *Eumenis semele* (Linnaeus, 1758) at the time, but the well established present combination is *Hipparchia semele*. An even higher-ranking example, *Rana pipiens* (Schreber, 1782), a model species used in medical, neurological, developmental and physiological studies for many years (e.g. Nilsson, 1964; Jackson & Reichlin, 1977; Ardelt et al., 2008) is now known also as *Lithobates pipiens* (i.e. Frost et al. 2006). In the similar Case 3407, the proposal of van der Linde et al. (2007) to protect the name of a much more important model organism, *Drosophila melanogaster*, was recently rejected by the Commission with an overwhelming majority vote. In that case, the authors of the proposal wanted to change the type species of the genus *Drosophila* from *D. funebris* to *D. melanogaster*. In the present Case 3508 the authors fail to provide a taxonomically feasible way to preserve the name *Maculinea.*

(4) No problems in conservation and legal protection have arisen for instance in the case of amphibians, despite extensive taxonomical changes that have recently taken place within this group (see Litvinchuk et al., 2005; Frost et al., 2006). These changes concerned such species as *Pelophylax lessonae* (Camerano, 1882) (formerly

Table 1. Google search for three different generic name combinations of *Maculinea* and *Phengaris* species. October 5, 2010.

Maculinea		***Phengaris***		***Glaucopsyche***	
M. arion	19,300	*P. arion*	6,170	*G. arion*	89,000
M. arionides	2,320	*P. arionides*	262	*G. arionides*	444
M. alcon	12,000	*P. alcon*	3,680	*G. alcon*	80,200
M. rebeli	7,070	*P. rebeli*	2,260	*G. rebeli*	76,400
M. teleius	34,000	*P. teleius*	2,270	*G. teleius*	3,650
M. nausithous	32,400	*P. nausithous*	569	*G. nausithous*	4,310
TOTAL	**107,090**		**15,211**		**254,004**
		P. albida	376	*G. albida*	53,200
		P. atroguttata	1,220	*G. atroguttata*	180
		P. daitozana	721	*G. daitozana*	119
TOTAL			**2,317**		**53,499**

Table 2. Google search for quoted combinations of different generic names of *Maculinea* and *Phengaris* species; i.e. for the strict binomen use. October 5, 2010.

Maculinea		***Phengaris***		***Glaucopsyche***	
M. arion	18,300	*P. arion*	4,620	*G. arion*	3,530
M. arionides	1,940	*P. arionides*	82	*G. arionides*	0
M. alcon	9,980	*P. alcon*	2,470	*G. alcon*	1,160
M. rebeli	5,270	*P. rebeli*	1,210	*G. rebeli*	110
M. teleius	31,300	*P. teleius*	1,380	*G. teleius*	1,480
M. nausithous	31,600	*P. nausithous*	312	*G. nausithous*	1,800
TOTAL	**98,390**		**10,074**		**8,080**
		P. albida	179	*G. albida*	0
		P. atroguttata	1,130	*G. atroguttata*	0
		P. daitozana	607	*G. daitozana*	0
TOTAL			**1,916**		**0**

Rana lessonae), *Epidalea calamita* (Laurenti, 1768) (formerly *Bufo calamita*) and *Pseudepidalea viridis* (Laurenti, 1768) (formerly *Bufo viridis*). All these species are protected by EU Habitat directive, Annex IV, as well as many other amphibians protected by law in many countries.

(5) The authors of Case 3508 used as an argument the numerical precedence of *Maculinea* over *Phengaris* in a Google search; the name *Maculinea* was used well over 30 times more often than the name *Phengaris* to designate all six species treated by them in *Maculinea*, as shown in the following table. Their argument is not representative as *Maculinea* was synonymised with *Phengaris* only three years ago. We demonstrate that there are a lower number of usages, i.e. 1,127 per year over 95 years for *Maculinea* and 5,070 over 3 years for *Phengaris* in the case of one species. This shows that *Phengaris* is being accepted by the lepidopterists' community. Furthermore, we have also checked the usage of *Glaucopsyche*. *Maculinea* was synonymised with this genus by Nässig (1995) and Google found more than 254,000 hits (Table 1). This argues against the stability of usage of *Maculinea* over almost a century. We are aware that the use of the Google search as an argument can be questioned as it can group together more species, and therefore we repeated the search with quoted names, i.e. looking strictly for binominal combinations (Table 2). Although these results were not so dramatic, they again demonstrated the acceptance

of *Phengaris* and could not confirm the stability of *Maculinea* (all but one of the species occurred in combination with three different generic names).

(6) Although it is not of any importance for the purpose of Case 3508, we note that the authors wrongly used 'Van Eecke' instead of 'van Eecke' throughout the text, as well as placing '[Sic!]' in the citation of [Denis & Schiffermüller (1775)], where the title was the correct German spelling in the 18th century.

(7) We therefore recommend rejection of these proposals, as the use of plenary power by the Commission would destabilise zoological nomenclature, and we support application of the Principle of Priority, i.e. the priority of *Phengaris* Doherty, 1891 over *Maculinea* van Eecke, 1915.

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Comments on the proposed conservation of usage of *Testudo gigantea* Schweigger, 1812 (currently *Geochelone (Aldabrachelys) gigantea*; Reptilia, Testudines)

(Case 3463; see BZN **66**: 34–50, 80–87, 169–186, 274–290, 352–357; **67**: 71–90, 170–178, 246–254)

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1. Summary

Case 3463 promotes nomenclatural stability and universality through conservation of the oldest, most frequently cited, most widely recognised name for the Aldabra tortoise, *Testudo gigantea* Schweigger, 1812, with a neotype fixed to Aldabra Atoll. It opposes nomenclatural confusion sustained by inconsistent, contradictory nomenclatural proposals causing incessant debates, and proposes the suppression of *Testudo dussumieri* Gray, 1831, a name resurrected after more than a century of disuse and tied to a lectotype of uncertain provenance and taxonomy, unsuitable as the name-bearing type for the Aldabra tortoise. Case 3463 does not pretend to resolve taxonomic questions or bear on generic names, other than to make *Aldabrachelys* Loveridge & Williams, 1957 – established explicitly for the Aldabra tortoise – available for this taxon. Case 3463 does not debate the veracity of the holotype of *T. gigantea*, disqualify certain professions from nomenclatural discussions, or restrict nomenclatural issues to the exclusive domain of an elite group. It seeks multidisciplinary relevance and widespread valuing of the Commission and its Code, especially in collaboration with specialists in conservation biology.