

Editor's response to Boudot (2022)

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Ad 1 and 2: See Schorr (2022): this volume.

Ad 3: We did not consider the identification of the larvae to be correct, as can easily be seen from our table 1 and figure 2.

Ad. 4: We used the phrasing “gold standard” exclusively in the context of the two taxa involved in our text. In addition: Boudot does not know the difficulties to produce such a book with the very limited financial sources IDF could made available to V. Skvortsov. Boudot is free to produce a better field guide.

Ad 5: As currently no one knows the true taxonomic status of *G. schneiderii*, caution is advised. To my knowledge the number of faunistic studies in the Russian part of the area of *G. vulgatissimus* and *schneiderii* is quite limited. The situation will be improved as IDF has funded studies in the region. The results are not published yet.

Ad. 6: We have only quoted a study of Ketenchiev & Haritonov. Boudot takes this quotation out of any logical context.

Ad. 7: No one is destroying Boudot. *Cordulegaster* sp. is a genus debated for long times. As each odonatologist is allowed to describe taxa, Skvortsov & Snegovaya considered specimens they had collected as two new taxa. And the editor regarded it as opportune to publish this paper for further discussion. Obviously Boudot refers to a paper from Schneider et al. (2021) on the genus *Cordulegaster* (Diversity 2021, 13, 667). One of the reviewers was so frustrated about this publication that he circulated his review and letter to the publisher to a few people: “More specifically I urge them to ... (3) discuss the genetic data, but attach no taxonomic conclusions to a distance threshold; (4) discuss the morphological variation, but hold off from describing taxa that currently have weak genetic support and no morphological confirmation ...]. Again: We should be cautious with jugdements and disparaging someone personally as done with V. Skvortsov and N. Snegovaya, and wait for further fair discussion of the *Cordulegaster* problem.

Ad. 8: It is fateful that the e-mail address I used was not valid anymore. No automatic reply was given so that we assumed that our e-mail had reached its recipient. But: Since I forwarded this e-mail addressed to Boudot to a co-author of the atlas, there would also have been a chance that Boudot had received notice of our very friendly and collegially formulated e-mail.

The phrasing of my e-mail should make it very clear that I had definitely no bad intentions:

Betreff: Gomphus schneiderii

Datum: Mon, 22 Nov 2021 08:55:14 +0100

Von: Martin Schorr <bierschorr1@online.de>

An: Boudot Jean-Pierre <jean.pierre.boudot@numericable.fr>

Dear Jean-Pierre,

In a current manuscript regarding new records of Odonata in Azerbaijan, Nataly Snegovaya reports a record of *G. schneiderii* she is considering a true and proven record for Azerbaijan. Browsing your fine new atlas of West and Central Asia Odonata, we found records dating prior 1990 in the map provided by you. I couldn't find any record of this species in my library, but obviously I missed some sources.

As Nataly considers her record as the first one in Azerbaijan, we would be very glad if you would provide us with an excerpt of your database with the records of *G. schneiderii* in Azerbaijan to give us the chance to assess the correct status of this species in Azerbaijan.

Thanks very much for your cooperation.

Best wishes

Martin

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Following Boudot's rebuttal, we tried to defuse the conflict and put it on a more technical basis. The result is documented on the following pages.

The all-important question of how Boudot distinguishes *Gomphus schneiderii* from *G. vulgatissimus* has still not been answered. From this point of view - and this becomes more and more important with the increasing length of the conflict and the discussion of the taxonomic problem - this is all a discussion about a phantom, because obviously there is currently no one who is able to distinguish the two taxa with certainty. The only exception may be Boudot, but he does not reveal how he does it.

Le 14/02/2022 à 21:22, Dr. Holger Hunger (INULA) a écrit :

Dear M. Boudot,

my name is Holger Hunger and I support the IDF primarily by linguistically editing and proofreading manuscripts. I also maintain the homepage of the IDF. I have not yet uploaded the edited version of IDF Report 168 with your response, because I absolutely agree with what Geert wrote on February 1. Our common goal - to advance odonatology and to work together to do so - should not be thwarted by emotions. Therefore, I think it would be really wise if you revised your reply, limiting it to the factual arguments given in points 1 and 2. In turn, Martin Schorr has agreed to add on the part of the authors Schorr & Snegovaya that unfortunately, due to your outdated e-mail address, a discussion of the facts before the article appeared failed.

What do you think about this? Please let me know! Of course, it is all up to you and if you are not interested, I can upload the pdf with your original reply just as well. In my humble opinion, that would be a pity, however,

Best regards

Holger Hunger

Response of Boudot (unedited original writing):

"The unfair, disloyal and discourteous paper published by Schorr & Snegovaya (2022) in IDF report 168, proves, upon reading, to have no sound basis and to rely on a superficial look only.

The minimum to criticize a paper is to read it instead to just looking at the images, and I will list hereafter the wrong statements it contains.

1- Contrarily to what is said, the reasons of the omission of *Gomphus vulgatissimus* and other doubtful taxa in the area covered are perfectly explicated in the atlas. Just read the taxonomy section page 10. It is not the place in such Atlas to discuss more and to resolve systematic and taxonomic uncertainties.

2- The statement that Bartenev was able to differentiate *G. vulgatissimus* from *G. schneiderii* is far from being convincing. Despite the huge contribution of Bartenev to Odonatology it is factual that he ascribed a too strong importance to colour details and individual aberrations, which are at the level of intraspecies variability and not at the species or subspecies level, leading it to describe many species and subspecies which don't actually exist in terms of distinct taxa (e.g. *Aeshna juncea atshischgho*, *A. undulata*, *Leucorrhinia circassica*, *L. ussuriensis*, *Lindenia inkiti*, *Sympetrum matrix*, *S. verum*...etc.), confounding intraspecific variability and interspecies differences (see e.g. Belevich & Yurchenko 2010) like many authors in old times. Prior to Morton's paper on the Odonata of Constantinople

(1915), *Gomphus schneiderii* and *G. vulgatissimus* were mostly separated by colour characters of strong variability as the structural characters we can use now, which originate from Selys (1850, 1857, 1887) had never been illustrated, making likely that Bartenev could not use them reliably. Three years after Bartenev's papers, Morton (1915) published drawings of the male abdominal appendages of one *G. vulgatissimus* and two *G. schneiderii* to allow a reliable identification of these two taxa. However the two *G. schneiderii* specimens were so different that one is equally different of the other than it is different from the drawing of *G. vulgatissimus*. Natural variability of each taxon was not accounted for by this paper, raising the issue of how representative actually they are and making their use difficult. It is factual that in 1912 Bartenev could not know and could not use Morton's paper published three years later. It is therefore uncertain whether Bartenev's record of *G. vulgatissimus* in Areš (Azerbaijan) is correct.

3- Claiming that larval determination of *Gomphus vulgatissimus* by Kasymov (1965) is correct is particularly naive as anybody know that a large part of purely larval papers published by general limnologists include basic aberrations (can we accept because that has been published that *Macromia splendens* and *Boyeria irene* reproduce in Oman, that *Somatochlora arctica* and *Coenagrion armatum* reproduce in temporary wadi in Algeria, that *Ophiogomphus cecilia* and *Coenagrion lunulatum* are plentiful in the rivers of Central Anatolia, and that New World Odonata species are common in Iran ?). Any identification of a species out of its known range basing on only larvae or exuviae should be carefully evaluated and often rejected. Prior to Seidenbusch (1995), Suhling & Müller (1996) and Brochard & Van Ploeg (2013) there was no way to separate the exuviae/larvae of *G. vulgatissimus* and *G. schneiderii* and the proposed criteria remain still to be validated at the continental scale throughout the range of both taxa (the same criteria of the occurrence or the absence of lateral spines on the 6th segment of the larvae or the exuviae has been proved to fail to separate reliably the larvae/exuviae of *Onychogomphus f. forcipatus* and *O. f. unguiculatus*, due to a number of exceptions (Julian & Julian; 1994)). Kasymov's work could not therefore separate reliably these *Gomphus* species at the larval stage.

4- The apparent rarity of *Gomphus vulgatissimus* from the North Caucasus countries (Onishko & Kosterin 2021, 2022) can hardly be due to a gap of field investigation, as Ciscaucasia had been enough covered in the past and the present to take the absence or rarity of this species in Ciscaucasia for true, and consequently, Azerbaijan, as geographically the easternmost part of Anatolia, is clearly out of the range of *G. vulgatissimus sensu stricto* and falls within the range of *G. schneiderii*. Both taxa seems to overlap and mixes only in the West Caucasus, Krasnodar kray (Onishko & Kosterin, 2022), where the Caucasus barrier lower considerably and can hardly act as a climate fence. Further East, *G. schneiderii* extends even on the northern side of the Caucasus in the Krasnodar, Adygea, Karachay-Cherkessia, Stavropol, Karbadino-Balkaria, North Ossetia and Daghestan republics and districts (Onishko & Kosterin, 2021; 2022), making the occurrence of *G. vulgatissimus* further South unlikely. Accordingly, Skvortsov (2010) mapped *G. schneiderii* (p. 583) and not *G. vulgatissimus* (p. 557) in Azerbaijan, adopting with

care the most reasonable point of view as possible in this respect. This is now confirmed by the emendation of a former record of *Gomphus vulgatissimus* by Snegovaya (2020) from Northeast Azerbaijan, which is now turned into *G. schneiderii* (Snegovaya, 2022). Being the obvious difficulty to separate both taxa at mid-latitudes (e.g. Northern Greece and some Caucasus countries), a previous record of *G. vulgatissimus* by Skvortsov & Snegovaya (2014) in the Northwest of the country cannot be accepted as reliable any more. The SEM photographs published in Schorr and Snegovaya (2022) don't demonstrate a precise identification. The apex of the superior appendages in lateral view looks more like one of those of *G. schneiderii* published in Morton's paper than to that of *G. vulgatissimus* in the same paper. Moreover it should be kept in mind that turning the angle of the SEM a little bit, this give another perspective and may suggest another identification. At least the comparison of the accessory genitalia in lateral view with those of *G. vulgatissimus* in the two editions of the Field Guide to the Dragonflies of Britain and Europe by Dijkstra et al. (2006, 2020) doesn't allow any conclusion as the correspondent drawing has not been included for *G. schneiderii*. In fact, the lateral view of the accessory genitalia for both taxa are mostly found in Buchholz (1954), pp.61-62. It turns that they are very similar and cannot be used for their taxonomic separation.

5- Rather than publishing such an unpleasant paper full of false claims and missing of substantiated statements, it would have been more correct to e-mail to the first author at the valid e-mail address indicated in the work incriminated.

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