

Case 3711—*Iberolacerta* Arribas and *Darevskia* Arribas (Chordata, Squamata, LACERTIDAE): proposals to deem these names available either from Arribas (1997) or from Arribas (1999)

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Abstract. The purpose of this application under Articles 78.1 and 81 of the Code is to request the Commission to use its plenary power to choose among two alternatives in order to preserve the genus name *Darevskia* and nomenclatural stability.

In Alternative A, the Commission is asked to accept the microfiche publication (Arribas, 1997) as a published work in the sense of the Code and made available the names included therein, placing *Iberolacerta* Arribas, 1997 and *Darevskia* Arribas, 1997 on the Official List of Generic Names in Zoology, their type species on the Official List of Specific Names in Zoology, and the microfiche edition of Arribas (1997) on the Official List of Works

Approved as Available for Zoological Nomenclature. This action will promote stability, as both names are widely accepted and, if the 1997 publication in microfiche is considered unavailable, then *Darevskia* Arribas, 1997 could potentially be threatened by *Caucasilacerta* Harris et al., 1998 (by authors who would not consider this name a nomen nudum), which would clearly disrupt stability. Not only would this alternative be the best way to preserve nomenclatural stability as stressed in the ICZN Preamble and repeated in several Articles of the Code, but it would also be the only way to ensure that these names (available at the time of their publication) remain available after the retroactive changes that have been introduced between the third and fourth editions of the Code. If Alternative A is chosen, both *Iberolacerta* and *Darevskia* become available from Arribas (1997).

In Alternative B, the microfiche publication (Arribas, 1997) is considered invalid and placed on the Official Index of Rejected and Invalid Works in Zoological Nomenclature. Both *Iberolacerta* and *Darevskia* would be considered published in Arribas (1999). Also, the Commission is asked to place on the Official Index of Rejected Generic Names in Zoology the name *Caucasilacerta* Harris et al., 1998 (as a nomen nudum due to the lack of a valid diagnosis) and to place on the Official List of Generic Names in Zoology the names *Iberolacerta* Arribas, 1999 and *Darevskia* Arribas, 1999.

Keywords. Nomenclature; taxonomy; Squamata; LACERTIDAE; *Iberolacerta*; *Darevskia*; Europe; Caucasus; Anatolia; Near East; microfiche edition; *Caucasilacerta*.

1. The genus *Darevskia* Arribas, 1997 (type species by original designation: *Lacerta saxicola* Eversmann, 1834 [= *Darevskia saxicola* (Eversmann, 1834)]; Arribas, 1997: 305) currently contains 32 recognized species (altogether 58 taxa including subspecies, seven of them parthenogenetic clonal “species”) distributed across the Caucasus region, Crimea and mountain areas of Asiatic Turkey eastwards to the Alborz mountains of Iran and to Kopet Dagh, on the Iran-Turkmenistan border, in addition to one species of the *D. praticola* complex: *D. pontica* that reaches the eastern Balkan Peninsula.

2. *Iberolacerta* Arribas, 1997 (type species by original designation: *Lacerta muralis* var. *monticola* Boulenger, 1905 [= *Iberolacerta monticola* (Boulenger, 1905); Arribas, 1997: 297]) contains eight species distributed mainly in mountainous areas of Western Europe, including central Portugal, central and northern Spain and the French Pyrenees, but also includes one species (*I. horvathi*) inhabiting northwestern Croatia, Slovenia and adjoining areas of northeastern Italy and Austria (Arnold et al., 2007).

3. There is ongoing controversy regarding the date of publication of the nominal genera *Iberolacerta* and *Darevskia*. Some sources regard the names as having been published in Arribas’s thesis (defended in 1996, but published as a printed summary plus the whole book in microfiche the following year; Arribas 1997), while others accept that these names were available from Arribas’s 1999 paper in the Russian Journal of Herpetology. Both dates have been used in many works, although in recent years the 1997 date has been used in most publications and databases (but not in the Nomenclator Zoologicus, in which the two genera are still attributed to Arribas, 1999). Arribas’s 1999 publication in the Russian Journal of Herpetology was supposed to be the formal taxonomic publication containing the description of *Iberolacerta* and *Darevskia* and it included the same text as in Arribas (1997), plus the description of the subgenus *Pyrenesaura* Arribas, 1999 [type species by

original designation: *Iberolacerta (Pyrenesaura) bonnali* Lantz, 1927; Arribas, 1999: 15], the publication date of which is not controversial. The publication of the PhD thesis is a mandatory procedure in Spain for obtaining the PhD degree. Publication usually occurs about 12 months after the defense, and in the case of Arribas, whose thesis was defended in 1996, the printed summary and microfiche were published in 1997. The manuscript of the latter journal article (Arribas, 1999) was received by the Russian Journal of Herpetology on 1 October 1997 (as can be seen in the publication itself), and was expected to appear early in 1998 (in the first issue –January to April–of this quarterly journal). Unfortunately, as a result of financial problems, issuance of one or two numbers of Russian Journal of Herpetology was delayed until the beginning of 1999 (Ilya S. Darevsky, pers. comm.), and Arribas's 1999 paper was not published until 15 April 1999 [<http://rjh.folium.ru/index.php/rjh/issue/view/24/showToc>], even though the publication information on the reprint cover states "Volume 6, n°1, January–April 1998". As a result of this delay, the article in the Russian Journal of Herpetology appeared in 1999, two years later than the publication of the thesis microfiche (Arribas, 1997).

4. The publication in microfiche (Arribas, 1997) contains all the information needed to make the two generic names available (see Fig. 1). In particular, it fulfills the conditions of Articles 8.5.2 (ICZN, 1985), 13.1.1 and 13.3 (ICZN, 1999, 2008, 2012) of the Code (see Arribas et al., 2017 for details about the publication). However, the fourth Edition (ICZN, 1999; amendments of 2012) of the Code does not allow publication as microfiche. Article 8.4 specifies: "*Works issued as physical copies. Printing on paper and optical disc are the only recognized formats for works issued as physical copies*" (ICZN, 2012). Under the rules now in force, the 1997 microfiche edition does not constitute a published work. Some names that were proposed while the third edition of the Code was in force are not available under the current edition of the Code. As the printed summary part of the 1997 thesis publication does not completely fulfill the conditions of Art. 13.1.1 and 13.3, *Iberolacerta* and *Darevskia* are not available from there either. Paradoxically however, these two generic names were fully available from the time of issuance of the microfiche document in 1997 until the fourth edition of the Code came into force in 2000. In the third Edition of the Code, publication in microfiche was allowed (although not recommended) (ICZN, 1985; see below) in the fourth Edition, although not explicitly forbidden, is not allowed as a valid form of publication (ICZN, 1999, 2008, 2012) with retroactive consequences. This, in practice, entails that publications and their contained names that were "valid" under previous versions of the Code, cease to be valid with the last version currently in force.

5. For *Iberolacerta*, this retroactive change would, if accepted, result only in a change of publication date (from 1997 to 1999), hence with minor consequences for nomenclature. However, for *Darevskia*, the consequences could be much worse: a paper on the phylogenetic relationships of LACERTIDAE (see Harris et al., 1998) proposed the name *Caucasilacerta* Harris et al., 1998. The authors did not make any explicit intention to establish a new nominal taxon (with the use of "gen. nov." or something similar), but that condition was not (and still is not) required for names published before 2000. There is a type species designation as well for *Caucasilacerta* in Harris et al., and this name and *Parvilacerta* [proposed in the same work but without a type species designation and thus unavailable there, later validated with new authorship and data by Arnold, et al., 2007: 50, with the type species *Lacerta parva* Boulenger, 1887] have been considered nomina nuda even by one of the authors of the first paper (see Arnold et al., 2007), as Harris et al. did not include for either name "a description or definition that states in words characters that are purported to differentiate the taxon" nor

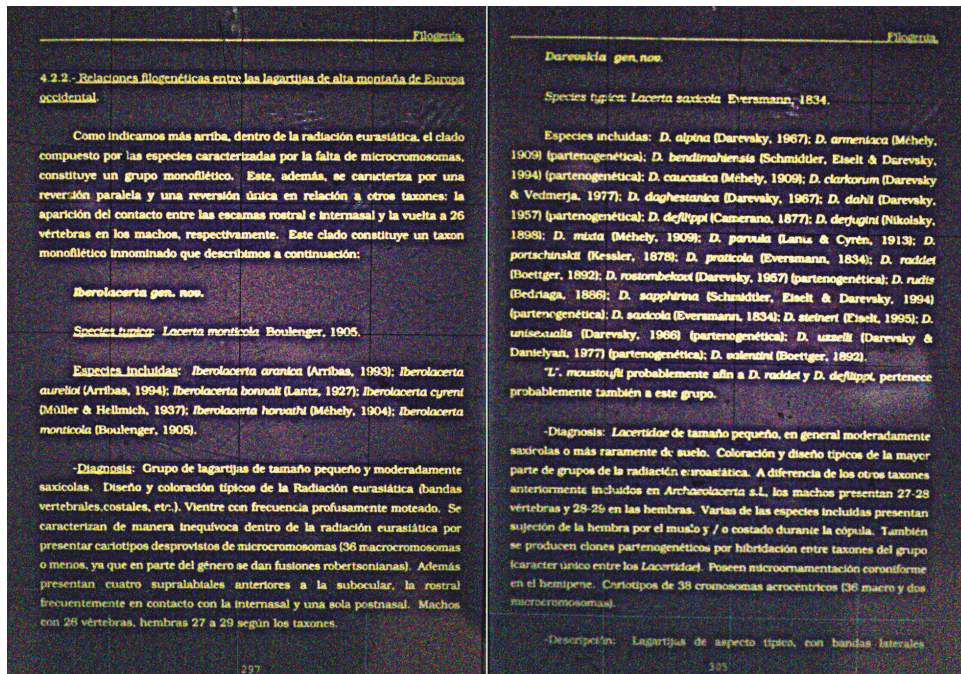


Fig 1. Photographs of text of original descriptions in the microfiche part of Arribas (1997) containing the key sections (new name, type species and diagnosis).

“a bibliographic reference to such a published statement” (see below points (9)(i) and (9)(j)).

6. *Caucasilacerta* Harris et al., 1998 has been considered as a *nomen nudum* for the last 20 years. The main reason for this was the lack of a diagnosis or reference to it (Arnold et al., 2007; note that one of the authors of Harris et al., 1998, Dr. E. N. Arnold, agreed with this point of view). Now, some authors (Busack et al., 2016) argue that a distant paragraph in the same paper could be a valid diagnosis and thus *Caucasilacerta* might be an available name. Acceptance of Busack et al.’s arguments would threaten stability and would negatively affect the name of a well-known and widely distributed genus without creating any benefit to this interesting group of lizards. However, Arribas (2016) argued why *Caucasilacerta* is a *nomen nudum*. The reasons are: a) the lack of diagnosis or reference to it “accompanying” (sic!, mandatory in the Code) the new name; b) the alleged possible diagnosis (*vide* Busack et al.) is 102 lines away (two pages, including a figure and its legend) and there is no reference to it accompanying the new name; and, even more importantly, c) the subject of the paragraph of the alleged diagnosis are “*the Rock-dwelling lacertids in the Caucasus*”(sic!), different from the group denomination to which the new name supposedly refers to, following its authors, the “*L. saxicola group*”(sic!; Harris et al, 1998: 1947). The relationship between both names can be only ascertained by a specialist in the group and the concerned geographic area. Moreover, nearly half of all *Darevskia* species live outside the Caucasus and numerous species do not live in rocks and are exclusively ground and tree stump dwellers (*D. praticola*, *D. pontica*, *D. derjugini*, *D. chlorogaster*, *D. kopetdaghica*

and *D. kamii*, for instance). If *Caucasilacerta* is a *nomen nudum* and thus unavailable, there is no nomenclatural problem, and the name *Darevskia* is preserved. However, if it is available and the microfiche (Arribas, 1997) is considered not published in the sense of the Code, *Caucasilacerta* from 1998 would be the valid name for the species currently included in *Darevskia*, thus considerably disrupting nomenclatural stability.

7. *Darevskia* has been extensively used since it was proposed in 1997. In a Google search on 20 January 2016 there were 37,100 results returned for *Darevskia* in contrast to only 155 for *Caucasilacerta* and the latter is usually treated as a junior synonym of *Darevskia*. On 8 March 2016, Google Scholar which mostly indexes published papers, returned 601 results for *Darevskia* versus 11 for *Caucasilacerta* (all as synonyms of *Darevskia*). Reducing the searches only to publications indexed in the Web of Science, 101 hits appeared for *Darevskia* and none for *Caucasilacerta*, besides its original description on 26 February 2016 and 73 versus zero in the Core Collection of the Web of Science on 6 March 2016. Considerable effort has been made to achieve uniformity in attributing *Darevskia* to Arribas, 1997 instead of Arribas, 1999. Reverting now to Arribas, 1999 would add more confusion, as reference works on lacertid lizards published over the last 10 years (e.g. Arnold et al., 2007; Ananjeva et al, 2006; Sindaco & Jeremcenko, 2008; Salvador, 2014) and databases as Lacerta.de [<http://www.lacerta.de/AS/Taxon.php?Genus=31>; <http://www.lacerta.de/AS/Taxon.php?Genus=33>] and the Reptile Database [<http://www.reptile-database.org/>] cite Arribas, 1997 as the author of both the nominal genera *Darevskia* and *Iberolacerta*. Finally, because of its seven parthenogenetic species, *Darevskia* has been the subject of a good number of publications in genetics among other topics (a list of 310 articles using *Darevskia* as the valid name for the genus is held by the Secretariat of the ICZN and is available for examination upon request to the Secretary).

8. We list the following in support of the valid publication of Arribas, 1997:

- (a) At the moment of the publication of the PhD Thesis (Arribas 1997; printed summary and microfiche), the Code version in force was the third edition (ICZN, 1985).
- (b) In the third edition of the Code (ICZN, 1985) despite the recommendation of Art. 8 (Rec. 8A) to avoid the use of microfiche, there is no prohibition of the use of microfiche for nomenclatural acts, clearly distinguishing microfiche from photographs [Art. 9(2)] and from microfilm [Art. 9(4)], which was already not considered a valid basis for the publication of nomenclatorial acts in the third edition of the Code, as can be seen in the following paragraph “c”.
- (c) According to Art. 9(2) (ICZN, 1985) “photographs as such except for microcards and microfiche in works first issued after 1985” were not considered valid forms of publication thus leaving microfiche as one of the valid forms of publication—although not recommended—at that time, and distinguishing it perfectly from microfilm [forbidden by both Codes: Art. 9(4), ICZN, 1985; Art. 9.4, ICZN, 1999, 2008, 2012].
- (d) Arribas’s (1997) PhD Thesis publication (paper summary and microfiche) is a valid publication with its own ISBN: 84-490-0830-1 (or ISBN: 978-84-490-0830-6 in the 13 digits format), unlike the unpublished version of the Thesis (1996) distributed to the members of the Thesis committee, that does not constitute a publication, in the sense of Art. 9(11) (ICZN, 1985) or the example of Art. 9 (ICZN, 1999, 2008, 2012), and implicitly fulfills all the requirements for permanent record and distribution (Art. 8, ICZN, 1985, 1999, 2008, 2012)

(see Arribas et al., 2017). Although it is not expressed explicitly (in such words) that the publication is intended for "...permanent, public, and scientific record" [Art. 8 (d)(ii)] or "produced in an edition containing simultaneously obtainable copies" [Art. 8 (d)(iii)] the intention of a scientific publication itself with its ISBN and being available by purchase is univocal in having these conditions covered.

- (e) The PhD Thesis publication (Arribas, 1997) was distributed by exchange to other university libraries and institutions, and was freely available by purchase [in accordance with Art. 8(a), ICZN, 1985; Art. 8.1, ICZN, 1999, 2008, 2012] [http://publicacions.uab.es/tesis/fitxa_web.asp?ID=482] at a price of 13,34€. Also, the author sent free exemplars to many other European lacertid specialists from Spain, Italy, United Kingdom, Austria, Germany and Russia (see Arribas et al., 2017).
- (f) The printed summary (printed on paper) of Arribas (1997) that accompanies the microfiche with the whole text includes the new names and the statement that there is a nomenclatural act ("gen. nov"). Also, in the case of *Iberolacerta*, it mentions a diagnostic character both in the Spanish and in the English summaries, whereas the type species and complete diagnoses, species included in both genera, etc., as well as the aforementioned actions, are all contained in the microfiche. The microfiche can be easily read by anyone with a stereomicroscope (binocular loupe) or with a microfiche viewer.
- (g) The name *Darevskia* is at risk if Arribas's (1997) publication is considered invalid in favor of Arribas (1999) and if a loose interpretation of the Code is adopted with respect to the lack of any immediate diagnosis accompanying the proposed name *Caucasilacerta* (Harris et al., 1998).
- (h) Microfiche is not considered as a valid method for publication of nomenclatural acts in the fourth edition (currently in force) of the Code or its amendments, but at the same time it is also not explicitly forbidden (contrary to the situation, for instance, with microfilms; Art. 9.4, ICZN, 1999, 2008, 2012).

9. As reasons to consider *Caucasilacerta* Harris et al., 1998 as a *nomen nudum*, unavailable, and thus not a junior synonym of *Darevskia* Arribas, 1997 (or senior synonym of *Darevskia* Arribas, 1999), we list the following (cf. Arribas, 2016):

- (i) The lack of characters or reference to them accompanying (mandatory in the ICZN Code) the new name. The alleged characters (*vide* Busack et al., 2016) are 102 lines away (two pages, including a figure and its legend) and there is not a reference to those characters accompanying the new name.
- (j) Even more important, the subject of the alleged characters (*vide* Busack et al., 2016) are "*the Rock-dwelling lacertids in the Caucasus*", well differentiated from the group to which the new name supposedly refers to, the "*L. saxicola* group" (sic!, Harris et al, 1998: 1497). A relationship between both names that can only be ascertained by a specialist in the group and the concerned geographic area. Moreover, in this "*L. saxicola* group" there is also a number of ground dwelling species that do not live in rocks, the genus has a much greater area than the Caucasus, and is sympatric across large areas with other lacertid genera.

10. The International Commission on Zoological Nomenclature is therefore requested to select between the following two alternatives:

Alternative A: The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to accept the microfiche publication (Arribas, 1997) as a published work in the sense of the Code and deem as available the names included therein;
- (2) to place on the Official List of Generic Names in Zoology:
 - (a) *Iberolacerta* Arribas, 1997 (gender: feminine); type species: *Lacerta muralis* var. *monticola* Boulenger, 1905 (currently *Iberolacerta monticola* (Boulenger, 1905)), by original designation;
 - (b) *Darevskia* Arribas, 1997 (gender feminine); type species: *Lacerta saxicola* Eversmann, 1834 (currently *Darevskia saxicola* (Eversmann, 1834)) by original designation; and
- (3) to place on the Official List of Works Approved as Available for Zoological Nomenclature the work: Arribas, O.J. 1997. Morfología, filogenia y biogeografía de las lagartijas de alta montaña de los Pirineos. Ph. Dr. Thesis. Universitat Autònoma de Barcelona. 353 pp. (8 pp in paper and 353 pp in microfiche). Publications Universitat Autònoma Barcelona.

Alternative B: The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power to confirm Arribas (1999) as the source of availability for the names *Iberolacerta* Arribas, 1999 and *Darevskia* Arribas, 1999;
- (2) to place on the Official List of Generic Names in Zoology the following names:
 - (a) *Iberolacerta* Arribas, 1999 (gender: feminine; type species *Lacerta muralis* var. *monticola* Boulenger, 1905 [currently *Iberolacerta monticola* (Boulenger, 1905)] by original designation);
 - (b) *Darevskia* Arribas, 1999 (gender feminine; type species *Lacerta saxicola* Eversmann, 1834 [currently *Darevskia saxicola* (Eversmann, 1834)] by original designation);
- (3) to place on the Official Index of Rejected and Invalid Generic Names in Zoology the name *Caucasilacerta* Harris et al. 1998 (a *nomen nudum*);
- (4) to place on the Official Index of Rejected and Invalid Works in Zoological Nomenclature the work: Arribas, O.J. 1997. Morfología, filogenia y biogeografía de las lagartijas de alta montaña de los Pirineos. Ph. Dr. Thesis. Universitat Autònoma de Barcelona. 353 pp. (8 pp in paper and 353 pp in microfiche). Publications Universitat Autònoma Barcelona.

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Comments on this case are invited for publication (subject to editing) in the Bulletin; they should be sent to the Secretariat, ICZN, Lee Kong Chian Natural History Museum, 2 Conservatory Drive, Singapore 117377, Republic of Singapore (e-mail: iczn@nus.edu.sg).