

**Comments on Article 74.7.3 of the Code (requirement for an express statement of the taxonomic purpose of a lectotype designation), including a proposal that it should be revoked**

Article 74.7 of the Code reads: 'To be valid, a lectotype designation made after 1999 must . . . [74.7.3] contain an express statement of the taxonomic purpose of the designation'.

There was no requirement for such a statement in the previous (1985) edition of the Code, which prescribed (as does the current edition) that 'each designation . . . must have as its object the definition of the taxon'.

(1) W.J. Pulawski

*California Academy of Sciences, San Francisco, California 94118, U.S.A.*

As a practicing taxonomist I feel obliged to protest against the Article 74.7.3 that first appeared in the new edition of the Code. In my view, this Article is objectionable and unnecessary for two reasons:

1. It requires a justification of the obvious. It is true that there are some rare cases of very unsatisfactory lectotype designations (e.g., specimens unsuitable for identification purposes are designated when better specimens are present; or a lectotype is selected from a mixed series, changing the established species concept or resulting in some other negative nomenclatural impact). Unfortunately we have no protection mechanism against unqualified work, and the formal statement required by the new Code adds nothing to the quality of lectotype designations. There is no need to justify in words the usual process of typification, the importance of which is clearly stated in Article 61.1. It is also inconsistent to require such a statement for lectotype designations when no similar provision is made for holotype designations.

2. Since every designation of a lectotype has to be individual (Article 74.3), the provision requires multiple repetitions when more than one lectotype is being designated in a paper. For example, I am preparing a large paper on *Tachysphex* wasps in which some 40 lectotypes are designated. Article 74.7.3 forces me to repeat 40 times the formula 'here designated in order to ensure the name's proper and consistent application'. I find this to be ridiculous.

I would strongly recommend that this ill-conceived innovation in the Code be deleted as soon as possible.

(2) Subsequently Dr Pulawski informed the Commission Secretariat that he had circulated his letter to more than 200 zoologists worldwide, and copies of it, with small individual variations, have been received from C. van Achtenberg (*Leiden, The Netherlands*), H. Dollfuss (*Mank, Austria*), F. Gusenleitner and J. Gusenleitner (*Linz, Austria*), J. Klimaszewski (*Sainte-Foy, Québec, Canada*), M. Kuhlmann (*Münster, Germany*), J. Leclercq (*Liège, Belgium*), A.S. Menke (*Bisbee, Arizona, U.S.A.*), M. Ohl (*Berlin, Germany*) and M. Schwarz (*Ansfelden, Austria*). Support for Dr Pulawski's letter has also been received from C.L. Bellamy (*Los Angeles, California, U.S.A.*), P. Dessart (*Bruxelles, Belgium*), P.K.L. Ng (*Singapore*), J.S. Noyes (*London, U.K.*) and F. Ronquist (*Uppsala, Sweden*).

## (3) D.A. Rider

*North Dakota State University, Fargo, North Dakota 58105, U.S.A.*

I must respectfully disagree with Dr Pulawski's letter reproduced above. I am currently working on a catalog of the Pentatomidae (Heteroptera) of the world, and I am trying to provide as much information as possible about the type specimens of each species. Dr Pulawski is correct in that the new Article 74.7 will not stop a curator from publishing a paper on the specimens in a museum and designating lectotypes. What it will stop, however, is inadvertent or careless designations. In the past curators frequently labeled one of the original specimens (syntypes) as 'type' or even 'holotype'; what then happened (very commonly, I must add) is that subsequent authors referred to that specimen as 'the type', without checking its true status; under the old Code this constituted a lectotype designation. From what I have seen curatorial selection of 'poor' specimens is much more common than Dr Pulawski suggests. The new Code eliminates such [future] inadvertent and inappropriate lectotype fixations.

I cannot see why Article 74.7.3 should cause objection. Is it really a big problem to make a statement of the taxonomic purpose of a lectotype designation? I have always done this (and I think many/most of us have done so too) and I do not find it cumbersome at all. The new rule simply makes it mandatory.

## (4) M.D. Webb

*Department of Entomology, The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*

The intention of Article 74.7.3 is evidently to prevent lectotype designations from being made as a matter of curatorial tidying-up. My own view is that in order to follow the 'spirit' of the new Code we should *not* just repeat a favourite statement after designating lectotypes. Rather, we should ask the question: is the identity of this taxon in doubt if we don't designate a lectotype? If it is not, then don't make a designation. In most cases taking the original syntype series as the name-bearing type causes no problem. When there is an over-riding taxonomic reason for designating a lectotype (e.g. the type series is composite) then we should do so, and state that reason. In other words, lectotype designations should be made in response to an existing (rather than hypothetical) problem.

## (5) A. Hamilton

*Biosystematics Research Institute, Agriculture and Agri-Food Canada, Ottawa, Ontario, K1A 0C6, Canada*

I am not worried about changes in the new Code when they are not retroactive, and Article 74.7.3 is not. In general I applaud any attempts to make taxonomic decisions and the reasons for them more 'transparent' (for example, synonymies are anathema if made without explanation and/or without mentioning whether type material was examined).

Reasons *for* designating a lectotype include:-

(a) One (or more), but not all, of the syntypes corresponds to the prevailing usage of the name and there is a real possibility that the type series may consist of more than one taxon. This covers the great majority of cases.

(b) The choice of a form (e.g. a sex or life stage) which is considered identifiable, when the type series includes other specimens which may not distinguish the taxon from related ones.

(c) Selection of a specimen which, unlike some other syntypes, comes from a locality where sibling species are absent.

(d) The supposed type series includes specimens of doubtful authenticity.

(e) Only one specimen actually corresponds to details in the original description.

(f) Original specimens exist (or may exist) in more than one collection, but some are not readily accessible.

(g) An original specimen is clearly labeled (e.g. with details of locality and date) but others are not.

(h) One (or a minority) of the syntypes are anomalous (e.g. if the type series consists of many females but only one male, possibly not conspecific, then a female lectotype would be appropriate).

There are probably other situations where lectotype designation is desirable, but these are ones which come readily to mind.

Reasons for *not* designating a lectotype include situations where the only known syntypes do not permit clear identification of the taxon, or they are not in accord with the current concept of the taxon (i.e. the prevailing usage of its name); in such instances a neotype may be appropriate despite the existence of original specimens (see Articles 75.5 and 75.6).

(6) Following the original letter from Dr Pulawski (see comments (1) and (2) above), he and Dr I.M. Kerzhner (*Zoological Institute, Russian Academy of Sciences, St Petersburg 199034, Russia*) sent to the Commission Secretariat on 25 February 2001 a formal request for the revocation of Article 74.7.3, i.e. its retrospective deletion from the Code. They also copied this request to other zoologists.

In addition to repeating the points in Dr Pulawski's original letter, they noted that the wording of Article 74.7.3 does not disqualify statements such as 'designated to increase stability of nomenclature'. Based on an electronic search of *Zoological Record*, they found an increasing number of lectotype designations in recent years and that the great majority of these did not include individual statements of taxonomic purpose. By extrapolation they estimated that in the year 2000 there were probably some 1600 designations in 600 publications which were not in accord with Article 74.7.3.

Drs Pulawski and Kerzhner said that 'a statement of the taxonomic purpose of lectotype designations was never required or recommended in previous editions of the Code, a need for it was never widely discussed, and it seldom occurred in pre-2000 publications. It is not surprising that most authors, reviewers and editors overlooked the new requirement. A contributing factor is that many academic centers, let alone countries, do not have a copy of the current Code'.

Drs Pulawski and Kerzhner concluded: 'Article 74.7.3 does not contain anything positive for nomenclature and is destabilizing. In our opinion, the current situation must be urgently corrected, and elimination of the Article is the only reasonable solution (this change would affect no other part of the Code, including the Recommendations). If the Commission agrees that the deletion is not a major change, under Article 78.3.2 it could issue a Declaration as a provisional amendment

to the Code. This would eliminate the current chaos and save zoologists and the Commission unnecessary work'. They proposed that the Commission should issue such a Declaration.

(7) Support for the proposal from Drs Pulawski and Kerzhner has been received from G.C.D. Griffiths (*Edmonton, Canada*), U. Kallweit (*Dresden, Germany*), A.L. Ozerov (*Moscow, Russia*), A.C. Pont (*Goring-on-Thames, U.K.*) and K. Rognes (*Stavanger, Norway*).

(8) O. Kraus

*Zoologisches Institut und Museum, Universität Hamburg, Martin-Luther-King Platz 3, 20146 Hamburg, Germany*

Stability of nomenclature is one of the basic aims of the Code, and this is of necessity linked to stability of the Code itself. The present edition should remain the basis for many years. Its provisions, specifically including Article 74.7.3, are the result of years of open discussions. Perhaps that Article is not truly fundamental, or it could be improved in its wording, but I am very strongly against its deletion. Amendments to the Code, if any, should be limited to real essentials, and changes which are said to be 'minor' should await the development of some future edition.

(9) A.P. Rasnitsyn

*Paleontological Institute, Russian Academy of Sciences, 117868 Moscow, Russia*

I wish to join the protest against Article 74.7.3. I have designated tens of lectotypes in a single publication, and it would be absurd if I had to explain the self-evident necessity to designate lectotypes of old and often confused species-group names under each individual type or species. In designating lectotypes a worker clears the field of taxonomy for future generations of colleagues in a comparatively safe way. I firmly believe that lectotype designations should be considered an important part of a taxonomist's professional activity, and particularly so for the everyday curatorial responsibility for the animal groups of which he or she has intimate knowledge. In my opinion Article 74.7.3 weakens the value of the type principle. It suggests that lectotype designation is appropriate only in cases of direct necessity (i.e. in cases of doubtful application of the name). This might be taken as a reason to consider *all* type designations as redundant unless there is a definite ambiguity in name application.

(10) F.C. Thompson

*Systematic Entomology Laboratory, USDA, c/o U.S. National Museum, Washington, D.C. 20560, U.S.A.*

Contrary to Drs Pulawski and Kerzhner (see (5) above), what became Article 74.7.3 was widely publicized during the development of the Code. For example, Article 74a of the Discussion Draft of which more than 1000 copies were issued in May 1995 stated 'a lectotype designation made after 19.. must give the author's reasons for believing that the designation is necessary', and this was flagged as a significant new proposal on p. 3 of the accompanying Explanatory Notes, in the Bulletin (BZN 52: 123, June 1995), and elsewhere. In the ensuing discussions (which involved more than 500 zoologists at meetings and in written and electronic correspondence) there was very little expressed opposition to this, although Dr

Kerzhner was one who did object. The remark by Drs Pulawski and Kerzhner that 'many academic centers, let alone countries, do not have a copy of the current Code' could be used as an argument against *all* new provisions. For example, they overlook Article 16, which requires that the intent to establish new nominal taxa and their typification must both be explicitly stated.

The few extra words required to satisfy Article 74.7.3 may be a 'statement of the obvious' but are no great hardship on any good worker.

(11) W.D.L. Ride

*Department of Geology, The Australian National University, P.O. Box 4, Canberra, ACT 2600, Australia*

The proposal by Pulawski and Kerzhner to delete Article 74.7.3 should be rejected. It would, if acceded to, result in the Commission taking an action that would both be destabilizing to nomenclature and be a cause of confusion as to the intentions of the Code to act in the interests of taxonomy. Its removal would be a major change to the Code which was adopted and approved by the Commission and the International Union of Biological Sciences following extensive discussion by the wider zoological community.

The importance of the role of lectotypification in classification cannot be over-emphasized. When they become necessary, lectotype selection and designation must be taxonomically meaningful, careful and explicit. Moreover the action is taken following a period of use of a name often established long before. The designator must take that usage into account when selecting a lectotype, and must then be satisfied that an important taxonomic purpose and nomenclatural stability are served by reducing the objective basis of the name (its name-bearing type) to the taxonomically most meaningful specimen. Careless or taxonomically unneeded lectotypification may prevent subsequent clarification should that become necessary, and so may be destructive of stability and universality.

For 40 years, since 1961, Article 74 of the Code has contained the provision that each lectotype designation 'must be made specifically for an individual species [or subspecies] and must have as its object the definition of that species'. The intention of the provision (and of the taxonomists who sought its inclusion in the Code) could not be more plain. The introduction of Article 74.7.3 in the current edition of the Code, requiring designators to provide 'an express statement of the taxonomic purpose of the designation', followed wide and prolonged consultations and is one expression of a progressive change throughout the rules eliminating the need for revisers to interpret subjectively the intentions of their predecessors. By requiring a designator to expressly state the taxonomic purpose of the designation it removes from the revisor the requirement to ascertain by inference alone that the purpose of the designation had 'as its object the definition of the taxon'. The definition of 'taxonomic' in the Glossary restricts the purpose to the better classification of organisms and eliminates routine curatorial 'housekeeping' or general nomenclatural 'tidiness' as acceptable reasons for lectotype designations.

The solution to the difficulties expressed by Pulawski and Kerzhner is already in the Code, and there is certainly no case that the matter is so urgent that the Commission should act in any other way than to consult widely with the international community as is required by Article 78.3.1 of the Code and Article 16 of its Constitution. The

suggested deletion of Article 74.7.3 does not 'merely clarify a provision of the Code' (see Article 78.3.2) and the Commission does not have the power to amend the Code without consultation, even if its members were minded to do so.

A lectotype designation published after 1999 without a statement of the taxonomic purpose is invalid, but a subsequent author should nevertheless act consistently with that action: Recommendation 74A should be followed, and a different specimen should not be designated unless, in the author's opinion, the invalid 'designation' is contrary to stability and is a cause of confusion. If a lectotype is judged to be taxonomically necessary then the invalidly designated specimen should be selected.

#### *Conclusion and summary*

Contrary to the view expressed above by Drs Pulawski and Kerzhner that 'Article 74.7.3 does not contain anything positive for nomenclature and is destabilizing', the Article is integral and it is important to the way in which nomenclature serves taxonomy. Article 74 does not only provide, by a nomenclatural rule, a convenient means of reducing a suite of objects (syntypes) from many to one (a lectotype) in the interests of objectivity. Lectotype selection is also a process whereby an original author's intention to base a name on a suite rather than on a single specimen (a holotype) may be amended; this must be done only to serve developing knowledge and not for any other purpose.

The present Article is a reflection of the long-held and clearly expressed wish of taxonomists that the Code should include provisions which promote good practice, that which takes proper account of taxonomic and nomenclatural actions. The Commission has responded to this wish between 1961 and 1999 by a sequence of improved wordings of Articles 74.3 and 74.7.3, the Glossary definition of 'taxonomic', and Recommendation 74A. I have no doubt that it is possible to further improve the words of Articles and Recommendations to express better the spirit of their purpose, but whatever words are adopted it will still be possible to circumvent their intention (for example by writing such scientifically meaningless formulae as 'designated to increase stability').

To remove Article 74.7.3 from the Code would send a signal to international biology that, rather than progressively making the practice of nomenclature more integral with taxonomy and more meaningful, the Commission is prepared to encourage practices which are less than careful (or, as has happened on a few occasions, actively irresponsible). I hope that Drs Pulawski and Kerzhner will not wish to pursue their proposal, because uncertainty as to the eventual outcome would inevitably continue for a long time and this would do nothing for stability or confidence in the Code.

(12) P.K. Tubbs

*c/o The Natural History Museum, Cromwell Road, London SW7 5BD, U.K.*

This comment is a personal one — it is not made as the Commission's Executive Secretary or as a member of the former Editorial Committee of the fourth edition of the Code.

It is not surprising that, as Drs Pulawski and Kerzhner have said (see (6) above), many lectotype designations are being made without an express statement of their purpose and are therefore in breach of Article 74.7.3. While many designations are made in response to a consciously perceived need to solve an actual problem, such as

described by Dr Hamilton in comment (5), there is also an assumption, evidently widely held, that lectotype designations should be a routine part of a revision of a taxonomic field even if no nomenclatural problems are immediately evident or foreseen (see Prof Rasnitsyn's comment (9)). Naturally such designations usually do have the definition of the taxon as their underlying intent, but they do not necessarily have a reason which could be summarised in a brief and meaningful 'express statement of taxonomic purpose'. Occasionally routine or curatorial designations have been made even though the designator was aware that the action would disturb prevailing nomenclature, and a subsequent author has had to make an application to the Commission to set aside the action (for example 'routine' but deliberate lectotype designations threatened to completely upset the names of the four most common bumble bees of Europe, and this was rectified in 1996 by Opinion 1828).

The statement of purpose required by Article 74.7.3 has been denounced as a 'statement of the obvious'. But, as mentioned above, often the reason for a lectotype designation is not obvious at all. When there is a perceived reason, then it is surely very easy to state it. Lectotype designations must be made individually for each species, not collectively. However, if a number of such individual designations were accompanied by an opening statement along the lines of 'Because in each of the following species the type series is composite we designate below lectotypes which are in accord with the established usage of the names', or 'Because the female syntypes do not distinguish between the following species we designate below male lectotypes in each case', then I would regard that as satisfying Article 74.7.3. In other words, I do not believe that the 'Because' or purpose statement (as distinct from the specimen selection and designation) has to be ritually repeated time after time — to require such multiple incantations would be unreasonable, and the Code proceeds on the (unstated) principle that reasonableness prevails!

As mentioned above by Dr Thompson in comment (10), the proposed Article 74.7.3 was widely publicised and considered in the years leading up to the current Code and very few adverse remarks were made: following the Code's publication in English and French in 1999, and subsequently in other languages, no objection was raised until Dr Pulawski's circular of November 2000. However, the proposal by Drs Pulawski and Kerzhner that the provision should be revoked needs to be considered on its merits.

I do not support the proposition. It is of course regrettable that many (perhaps even a majority) of recent designations fail, presumably through understandable oversight, to meet the requirement of Article 74.7.3 and are therefore invalid. However, under the Code these purported designations place a responsibility on subsequent authors who do see a positive need for a lectotype. Recommendation 74A, mentioned above by Prof Ride, states that 'In designating a lectotype, in order to preserve stability of nomenclature authors should act consistently with, and in any event give great weight to, previously accepted taxonomic restrictions of the application of the name'. It follows that invalid designations are not necessarily 'wasted': they have enduring influence, and there is no need for them to be repeated in valid form or to be the subject of Commission rulings. A future worker is able to override them by a different but valid designation, but must do so only if there is very good reason for setting aside the earlier restriction.

The belief that lectotypes should be designated as a matter of 'routine' revisory work is surely mistaken. Many well known species do not have any existing type material, and yet their names are of undoubted application: in other instances the taxon is better delineated by the original author's type series than by a subsequent worker's arbitrary, if well meaning, restriction to a single specimen (and, for it to have any effect, other zoologists have to be aware of that restriction).

I appreciate and share the disquiet about the fact that Article 74.7.3 is, up to the present, as frequently contravened as it is followed. However, the correspondence started by Dr Pulawski may serve the very useful purpose of bringing the new provision, which I believe has much merit, to wider attention and one may hope that the requirement will be increasingly complied with. Present ignorance of the Article is not an adequate reason to delete it; if this were so many other provisions would be at risk, and stability of the Code is of great importance.

**Comment on the proposed conservation of *Hydrobia* Hartmann, 1821 (Mollusca, Gastropoda) and *Cyclostoma acutum* Draparnaud, 1805 (currently *Hydrobia acuta*) by the replacement of the lectotype of *H. acuta* with a neotype; proposed designation of *Turbo ventrosus* Montagu, 1803 as the type species of *Ventrosia* Radoman, 1977; and proposed emendation of spelling of HYDROBIINA Mulsant, 1844 (Insecta, Coleoptera) to HYDROBIUSINA, so removing the homonymy with HYDROBIIDAE Troschel, 1857 (Mollusca)**

(Case 3087: see BZN 55: 139-145; 56: 56-63, 143-148, 187-190, 268-270; 58: 56-58)

Edmund Gittenberger

*Nationaal Natuurhistorisch Museum, P.O. Box 9517, 2300 RA Leiden,  
The Netherlands*

Much of what has been written in the *Bulletin* on this case relates to systematics, not nomenclature. The question at issue is a simple one: should a valid lectotype designation be accepted if there is disagreement on the outcome among systematists for a variety of reasons? In other words, should Boeter's (1984) lectotype designation for *Hydrobia acuta* (Draparnaud, 1805) be allowed to stand, or should it be replaced by a neotype as proposed by Giusti et al. in their application?

In my view the Code serves as the tool to solve nomenclatural problems such as this. In this case the alternatives are not stability versus instability, but they divide systematists into two camps. Systematical considerations, forthcoming publications (demonstrating clearly that the concepts of various taxa have to be changed anyway) and the psychology of authors have no place here.

In essence the case relates to three questions:

- (a) Is the existing lectotype a former syntype?
- (b) Has the lectotype been validly designated?
- (c) Can the lectotype be identified without reasonable doubt?

There are clear affirmative answers to all three questions, agreed by both camps of systematists. I am in favour of accepting the existing lectotype. A neotype (suggesting that all the syntypes cannot be identified) would not bring the current confusion to an end. Only good taxonomic research will do this.