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THE AUTHORSHIP OF THE NAMES OF SPECIES OF CRUSTACEA DECAPODA PUBLISHED IN 1835 BY S. HAILSTONE AND J. O. WESTWOOD

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The amateur naturalist S. Hailstone, who lived in Hastings, England, was much interested in the Crustacea of his area and made collections of these. At several occasions in 1834 and 1835 he sent observations on interesting specimens, often together with the material, to J. C. Loudon, the editor of "The Magazine of Natural History, and Journal of Zoology, Botany, Mineralogy, Geology, and Meteorology", one of the forerunners of the well known "Annals and Magazine of Natural History". Hailstone often accompanied his notes with requests for identification of the species, which he had either not at all or only tentatively identified. Loudon passed Hailstone's notes and the material (if the latter was available) on to J. O. Westwood, the well known entomologist, who at that time lived in Hammersmith. Westwood gave his remarks on the material and in some instances provided new names when he thought the species to be new and at several occasions he made illustrations of the species.

Loudon published Hailstone and Westwood's observations in his Magazine interspersed with his own remarks. He very carefully identified the author of each piece of text by giving the name and/or address of Hailstone and Westwood at the end of their text, and by placing his own words in square brackets. It is clear that he furthermore also inserted Westwood's new names and Westwood's figures in Hailstone's text. The first observations were published in the May issue of 1835 of the Magazine of Natural History (vol. 8 no. 49) as Article V of that issue, under the title "Descriptions of some Species of Crustaceous Animals; by S. Hailstone, Jun. Esq.: with Illustrations and Remarks, by J. O. Westwood, Esq. F. L. S. &c.". The article starts on p. 261, but it is extremely difficult to find out where it ends.

Article VI of the issue starts at p. 277, but before this, on pp. 276-277, there is a note entitled "Desultory Remarks relative to Points in the Economy of various Crustàcea, by the late Rev. L. Guilding", which has no article number, and still cannot be considered part of Art. V as it has no bearing whatever on the subject treated in that article. A number of similar notes, most with title and author and only one without title, are found between pp. 266 and 276; as the author of each is either Hailstone or Westwood, these notes could be considered part of Art. V, but this proves only to be true for the first of these notes (pp. 266-268), the rest evidently being added later. All of the text by Hailstone and Westwood from pp. 261-276 will be dealt with below. It is divided here in 9 parts, the first two of which form Article V, the rest is considered to consist of separate additional notes.

- (1) The text of the first part occupies 5 pages and includes 4 figures (pp. 261-265, figs. 25-28). It is entirely written by Hailstone except for 2 short unimportant paragraphs (one on p. 262, the other on p. 264) which, judging by their contents and the fact that they are placed in square brackets evidently are added by the editor. The illustrations are made by Westwood. The regular text of this first part is divided in three sections, each signed with Mr. Hailstone's address: "16. Undercliffe, St. Leonard's, Hastings"; "St. Leonard's, Hastings" and "2. Denmark Place, Hastings"; they are dated June 3 and July, 1834; July 11, 1834; and November 7, 1834, respectively. Five species of Crustacea are described and four are figured here. The headings of the text dealing with them give the species names as "Gen. Pontóphilus, Sp. trispinòsus Hailstone" (p. 261, fig. 25), "Gen. Hyas, Sp. [? coarctàta, in a young state] serràtus Hailstone" (p. 262, fig. 26), "Gen. Macropòdia, Sp.? Phalángium in a young state" (p. 263, fig. 27); "Gen. Porcellàna, Sp. minùta Westwood" (p. 265, fig. 28); and "Porcellàna, second species" (p. 265).
- (2) The second part consist of $2\frac{1}{2}$ pages (pp. 266-268) and has a separate title "Observations upon Mr. Hailstone's Crustàcea. By J. O. Westwood, Esq. F. L. S. &c.". This evidently is what in the title to Art. V is referred to as "Remarks, by J. O. Westwood", and thus clearly forms part of Art. V. In this second part the 4 species, which Hailstone described in the first, are discussed: the first species (Pontophilus) is considered new, characters are mentioned but no name is given, the second (Hyas) is indicated as a juvenile H. coarctata, the third (Macropodia) is said to be a young M. phalangium, while the fourth (Porcellana) is considered new, "whence the name of P. minùta may be applied to it" (p. 267), the fifth species (the 2nd Porcellana) is not further discussed by Westwood, as it got lost before it reached him.

This second part is signed with Westwood's address: "The Grove, Hammersmith, Jan. 28, 1835".

(3) A short remark (in square brackets) by the editor introduces the third part: "When we were (Feb. 21) on the point of taking all the preceding notices on Crustàcea to press we found that Mr. Hailstone had sent us another set of specimens....". Evidently the first two parts formed the original article and the title given to the article only refers to them. The third and following parts may be considered addenda, not forming part of the original article.

The third part (pp. 268-269) has no title, but it is written by Hailstone (as evidenced by the signature at the end). It contains the description and figure of "Genus Porcellàna, sp." (p. 268; reference is made to fig. 29 on p. 270). No new names are given.

- (4) The fourth part occupies slightly more than a page of text (pp. 269, 270) and fig. 29. It has the title: "[Observations, by Mr. Westwood, on the Specimens of, and Remarks on, a Species of Porcellàna sent by Mr. Hailstone]". The text is signed at the end by Westwood and dated March 12, 1835; it deals with the same animal as the one treated in part 3. No name is given. The figure is made by Westwood.
- (5) The fifth part of the text (p. 270-273) is again by Hailstone, it bears the title: "[Notices of another Species of Pontóphilus, and of a Crustacean allied to the Genus Hippólyte; by S. Hailstone, jun., Esq.]". The first section of this part (pp. 270 and 271 first half) is a letter by Hailstone introducing the descriptions of two species, that follow immediately. These descriptions are both illustrated by Hailstone himself (thus this time not by Westwood) as is made clear in the introductory letter. The rather extensive descriptions are provided with the following headings: "Ord. Macroúra, Fam. Palaemónidae, Gen. Pontóphilus [Sp. bispinòsus Westwood, in p. 273. (fig. 30.)]" (p. 271), and "Ord. Macroúra, Fam. Palaemónidae, Gen. Phippólyte, Sp. ?rubra Westwood. (fig. 31.)" (p. 272).

A two line remark by the editor (in square brackets) separates the two descriptions.

- (6) In the middle of p. 273 is a piece of text with the heading "Ancèus forficulàrius *Risso*". It is not otherwise separated from the previous text, to which it, judging by the title of pt. 5 does not belong. This sixth part, short as it is, is a mixture of remarks by the two authors and the editor, each being meticulously identified (square brackets for the editor, their names for the 2 authors). No new names are proposed here.
- (7) The following paragraph (p. 273, 274) is headed: "[Notes on Pontó-philus, species bispinòsus Westwood, by Mr. Westwood.]" Here Westwood

states his reasons for considering Hailstone's second *Pontophilus* (the one described in the fifth part of the text) a new species, and goes on (p. 274) "Mr. Hailstone having omitted to complete his account by prefixing a name to the description, I have supplied the want by employing that given above [in the heading of this 7th part], suggested by the two spines on the shell".

- (8) The next part (pp. 274-275) is entitled "[Notes upon Hippólyte?rùbra, by Mr. Westwood.]". Here the second of the two new species of part (5) is discussed and the name Hippolyte?rubra suggested for it.
- (9) The last part (pp. 275-276 fig. 32) follows the 8th without any break. It is signed by Westwood and deals with larval development of Crustacea in general and has no direct bearing on the previous text. No new names are suggested. The illustration is a copy by Westwood of a figure of a larva of Cancer pagurus, first published by J. V. Thompson (1829, Zoological Reserches, 2: pl. 8 fig. 1).

In this whole complex of articles and notes five new species are described: Pontophilus trispinosus (p. 261, fig. 25), Hyas serratus (p. 262, fig. 26), Porcellana minuta (p. 265, fig. 28), Pontophilus bispinosus (p. 271, fig. 30) and Hippolyte rubra (p. 272, fig. 31).

The question of the authorship of these new names is not very easy to answer, also because not all species are proposed under the same circumstances.

According to Article 50 of the International Code of Zoological Nomenclature: "The author (authors) of a scientific name is (are) the person (persons) who first publish(es) it in a way that satisfies the criteria of availability, unless it is clear from the contents of the publication that only one (or some) of the joint authors, or some other person (or persons), is alone responsible both for the name and the conditions that make it available".

In the case of the species *Pontophilus trispinosus* and *Hyas serratus*, both the name and description were provided by Hailstone in the text that was clearly marked as written by him. These two names were nowhere mentioned in Westwood's text. Hailstone is therefore clearly the sole author of these two names. As the text containing the descriptions forms part of the joint paper (Article V) by Hailstone and Westwood, the correct way to cite these names is *Pontophilus trispinosus* Hailstone in Hailstone & Westwood, 1835 and *Hyas serratus* Hailstone in Hailstone & Westwood, 1835.

The situation with the third species, *Porcellana minuta*, is different. Hailstone, it is true, gave the description of the species, but did not know whether it was new. In his accompanying letter he wrote the editor that the two crabs

that he had collected appeared to him to belong to the genus Porcellana and he asked Mr. Loudon "to submit them to the judgment of your adviser in Crustàcea. I send you descriptions of them, in case they should prove to be undescribed species; but, as I can hardly suppose this to be the case....". As shown in part (2) Westwood thought the first *Porcellana* to be new, gave it the name minuta (p. 267), and provided a figure of it. The editor, when making the joint paper ready for the press, included the name Porcellana minuta also in Hailstone's part of the text, placing it in the heading of the notes dealing with that species, and put also Westwood's illustration there. In the part of the text of Article V which is clearly Hailstone's, there appears thus the name Porcellana minuta, a figure and a description of the species. As Westwood is only responsible for the name and the figure, but not for the description, and as this responsibility is not definitely stated here, Hailstone must be considered the author of Porcellana minuta as published on p. 265. In Westwood's part of the text of the joint paper the name Porcellana minuta is also used (it even is proposed there) and his reference to the figure (fig. 27) also makes this name available. Thus there is a Porcellana minuta Hailstone in Hailstone & Westwood, 1835 and a Porcellana minuta Westwood in Hailstone & Westwood, 1835, which are both objective synonyms and homonyms, published on the same date. Since the text by Hailstone and that by Westwood is so meticulously identified by the editor, it is impossible to consider joint authorship for the species name.

The case of the last two new species Pontophilus bispinosus and Hippolyte rubra is very similar to that of Porcellana minuta. Hailstone provided here not only the descriptions but also the figures which were published in the text indicated above as part 5. Originally Hailstone did not provide new names with his descriptions. These new names were proposed in litteris by Westwood and published in his notes forming parts 7 and 8 above. The editor, however, entered these new names also in Hailstone's paper when that was sent to the printers. So that the new names appeared both in Hailstone's paper (each accompanied by a good description and figure) and in Westwood's notes that were simultaneously published and where they are accompanied by descriptive notes sufficient to make these names available. Like with Porcellana minuta here 2 sets of names that are objective synonyms and homonyms are published simultaneously: Pontophilus bispinosus Hailstone, 1835, Pontophilus bispinosus Westwood, 1835, Hippolyte rubra Hailstone, 1835 and Hippolyte rubra Westwood, 1835.

As the texts by Hailstone and Westwood dealing with these species (parts 5, 7 and 8 of the above division) do not form part of the joint paper,

but must be considered separate publications, the indication "in Hailstone & Westwood, 1835" as used with *Porcellana minuta* is not appropriate.

So far as I know no revisor has ever chosen between the two sets of competing names, and therefore I select here the names *Porcellana minuta* Hailstone in Hailstone & Westwood, 1835, *Pontophilus bispinosus* Hailstone, 1835 and *Hippolyte rubra* Hailstone, 1835 to be treated as having priority over respectively *Porcellana minuta* Westwood in Hailstone & Westwood, 1835, *Pontophilus bispinosus* Westwood, 1835, and *Hippolyte rubra* Westwood, 1835. This choice is guided by the facts that (1) usually Hailstone and not Westwood is cited as the author and (2) in this way Hailstone becomes the author of all the names published in this conglomerate of articles and notes.

The story does not end here as the peculiar way of publication of Hailstone's and Westwood's contributions leads to a further, rather unpleasant, discussion between the two gentlemen. Hailstone (1835: 394-395) in the July issue of the same volume of the Magazine (vol. 8 no. 51), published a note "The Species of Crustaceous Animals discovered and described by Mr. Hailstone, and illustrated and annotated on by Mr. Westwood (261-276)". In this note Hailstone cleared up some points queried by Westwood, and at the same time he objected to the names proposed by Westwood: "Having been fortunate enough to discover and describe the animals in question, I think I am at liberty to claim the insertion of trivial names, which seem to me more adapted to them" (p. 394). In the second part of his note (p. 395) these names were given by Hailstone as follows: "Pontóphilus trispinòsus Hailstone (p. 261.); P. bispinòsus Hailstone (p. 271. 273. 274.); for, of course, no other name can be given it; Hippólyte macrochèles Hailstone (p. 272. 274.); Porcellàna Linneàna Leach (p. 265. 268-270.)". Also Hailstone gave his reasons here why the Porcellana should not be considered new but identical with a species already described by Leach. The editor appended a note (p. 305) taking all the blame for the unfortunate situation: "We claim all the blame of not giving Mr. Hailstone an opportunity of applying these names, or what names he would, before our publishing his communications on these Crustàcea, by our sending him a proof of them. Had Mr. Hailstone hinted a wish, or had Mr. Westwood, when he kindly undertook the farther identification of the forms of Crustàcea which Mr. Hailstone had described, received from us an intimation that Mr. Hailstone was wishing to have the denominating of them, Mr. Westwood would, we are certain, have left the opportunity open". Finally Westwood on pp. 551-553 of the same volume defended himself against "Mr. Hailstone's animadversions" (p. 551) and concluded that he (Westwood) had a perfect right to name the animals and that the names proposed by him "must stand, because, having been once published". Westwood took at the same time the opportunity to propose a new generic name *Dienecia* for his *Hippolyte rubra*. With this note a revised figure (fig. 49) of part of Hailstone's original figure of *Hippolyte rubra* (fig. 31 on p. 272) was published by the editor.

These 2 additional notes (which have exactly the same title) thus contain one new species name, *Hippolyte macrocheles* Hailstone, 1835 (p. 395), and one new generic name, *Dienecia* Westwood, 1835 (p. 552).

Of all the names proposed in this collection of notes and in Article V only three at present are considered valid: *Pontophilus trispinosus* Hailstone in Hailstone & Westwood, 1835; *Pontophilus bispinosus* Hailstone, 1835; and *Hippolyte macrocheles* Hailstone, 1835 (= Alpheus macrocheles (Hailstone, 1835)).

The generic name Dienecia Westwood, 1835, is considered a junior subjective synonym of Alpheus Fabricius, 1798. Hyas serratus Hailstone in Hailstone & Westwood, 1835, is taken to be based on a juvenile of Hyas coarctatus Leach, 1815, Porcellana minuta Hailstone, in Hailstone & Westwood, 1835, is a junior synonym of Pisidia longicornis (Linnaeus, 1767). Hippolyte rubra Hailstone, 1835, is a junior secondary homonym of Cryptophthalmus ruber Rafinesque, 1814, as both species belong in the genus Alpheus. Therefore the specific epithet macrocheles of its junior synonym Hippolyte macrocheles Hailstone, 1835, becomes the valid specific epithet of the species, which now is known as Alpheus macrocheles (Hailstone, 1835).