

The Anatomy of a Proposed Name Change Involving *Chthamalus southwardorum* (Cirripedia, Balanomorpha, Chthamalidae), a Critique

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Introduction

This critique concerns the correct name for a species, itself a relatively trivial matter of little immediate consequence to science other than evidently complicating our understanding of diversity and this is contrary to the goal of the Binomial or Linnaean System of Nomenclature [1]. This system is presently governed by the “International Code of Zoological Nomenclature” authored by the “International Commission on Zoological Nomenclature” and first published in 1961. There are two relatively recent editions of the Code [2,3] and they often differ in subtle and sometimes confusing ways whereby some commissioners as well as practicing taxonomists may read parts of an old rule into its current counterpart, as seems apparent in the present case.

Chan et al. [4] reject the original name, *Chthamalus southwardorum* Pitombo and Burton, 2007, because the genitive ending, “-orum” is for both Southwards whereas the authors’ stated derivation of the name was for Alan Southward alone, albeit that was unavailable because there was already a *Chthamalus southwardi* Poltarukha [6]. Therefore Chan et al. [4] proposed “*Chthamalus alani* Chan et al., 2016: 8” as the replacement name for *C. southwardorum*. Their decision rests on the willingness of at least two of Chan’s four co-authors to accept the advice of three well recognized systematists at the Natural History Museum, London; their conclusion being that the original name of this species is a misspelling of a Latinized personal name.

Extensive rules and recommendations over the use of genitives names, stemming back to 17th Century academicians and scholarly clergy who distinguished themselves from lay workers by Latinizing their family names, are found in the 3rd edition International Code of Zoological Nomenclature [2], and some but not all of it is carried over in the 4th edition of the Code [3]. But the present perceived problem was apparently not one of them for as can be seen in a succinct ICZN posting <<http://iczn.org/content/what-correct-original-spelling>> “... names based on personal names with incorrectly Latinized endings are not corrected as this would cause instability (Article 32.5.1...)”. While the present authors have come to understand that not all ICZN Commissioners would agree with this posting, in consulting with ICZN Commissioner, Dr. Mark Grygier, over the rules involved, we find no demonstrable basis for such dissent other than perhaps tradition. Therefore it is concluded that *Chthamalus southwardorum* [5] is the valid original name and cannot be changed.

Discussion

A long puzzling and misunderstood Western Atlantic-Eastern Pacific species complex [7-9] became of broader interest when a Caribbean member was accidentally introduced to the Hawaiian Islands by ships and subsequently spread to other islands of the Central Pacific [9,10]. This drew attention to the remainder of the Pacific and the Indian Ocean *Chthamalus* that amongst other things refined our understanding of the four species groups within the *stellatus* section of *Chthamalus* [11].

Hedgecock [12], Pitombo and Burton [5], Wares et al. [13], Meyers et al. [14], Ashton et al. [15] and Chan et al. [4] have much refined our understanding of species diversity and distribution in the *fuscus* group of the *stellatus* section of *Chthamalus*. However, Chan et al. [4] correctly note that of the numerous species, the specific name of *Chthamalus southwardorum* Pitombo and Burton [5] did not agree with the authors’ derivation of the name. They therefore devote considerable attention to the matter relative to the International Code of Zoological Nomenclature (ICZN) and in consultation with three carcinologists at the Natural History Museum (London) they conclude the name must be changed. If their proposal were acceptable, not only name and authorship but the formal synonymy would change, as illustrated in Figure 1.

Chthamalus southwardorum Pitombo & Burton, 2007:9
Chthamalus southwardorum, Wares et al 2009
Chthamalus southwardorum, Meyers et al 2013 in part., Chan et al 2016
Chthamalus southwardorum, Ashton et al 2016
to
Chthamalus alani Chan, 2016 in Chan, Chen, Dando, Southward & Southward 2016:8
Chthamalus southwardorum Pitombo & Burton, 2007
Chthamalus southwardorum, Wares et al 2009
Chthamalus southwardorum, Meyers et al, 2013 in part.
Chthamalus southwardorum, Ashton et al 2016

Figure 1: If the proposal of Chan et al (2016) were accepted, the formal synonymy as well as name and authorship would change as illustrated here.

There is no question that parts of “The Code” as it is commonly referred to are complicated, and unless one feels fully conversant with them it is best to consult with those willing to try be helpful, as Chan et al. [4] did, and as we did after their paper was published. While their

proposal is readily rejected, based on the ICZN posting alone (URL given above), it is instructive to examine the rules and recommendations that were used by Chan et al. [4] in deciding the name had to be changed.

Chan et al. [4] refer to four ICZN Articles, 31.1.2, 32.5.1, 21.13 (sic) and 57.2. Taken in numerical order, we find Article 21 concerns the determination of dates rather than names, yet they state, "... the name *C. southwardorum* is not admissible under Article 21.13 (sic) and has to be treated as an *incorrect original spelling*..." (emphasis ours). There is no Article 21.13, and Article 22 also concerns dates rather than names. While Article 23 concerns priority and Article 24 deals with simultaneous publication, Article 25 consists of three recommendations on the formation and treatment of names. The second recommendation 25B is on derivation and so it must have been the recommendation they had in mind! If so, 21.13 (sic) was a misprint for 25B in which it is noted, "In publishing a new scientific name an author should state its derivation". With that apparently settled, we can now move on to Chan et al. [4] assessment of Articles 31 and 32 concerning species group names and original spellings, respectively.

Article 31.1 concerns the Latinization of personal names. We are concerned with "Southward", rather than a hypothetical Latinized surname such as "Southwardius" presumably stemming back to when some academicians and clergymen had Latinized surnames, such as "Linnaeus" coined by Linné during the Renaissance. Article 31.1.2 applies to modern names such as "Southward" and southwardi and southwardorum are acceptable Latinizations. The former was preoccupied, but the latter was available. If it had been spelled say southwardorium (sic) in Pitombo and Burton [5], it would have been a misspelling. But their mistake was in Latinization, not in spelling which brings us to 31.1.3, the next rule cited by Chan et al [4].

It is noted in Article 31.1.3 that the original spelling is to be preserved unless it is an incorrect spelling, which it is not, as taken up in Article 31.1.2 above. This condition is further affirmed in Article 32 regarding original spellings, the relevant parts stating that a name is the "correct original spelling" (32.2) unless it is demonstrably incorrectly spelled (32.5), which it is not. The coup de grace is found in Article 32.5.1 also cited by Chan et al. [4], where it is stated that while inadvertent spelling errors must be corrected, incorrect transliteration or Latinization, or (even) use of inappropriate connecting vowels, do not constitute inadvertent errors. It follows that; contrary to Chan et al. [4], the name *Chthamalus southwardorum* Pitombo and Burton [5] cannot be changed because it is not misspelled.

Apologia

In hindsight Eve Southward should have been advised that it was Pitombo and Burton's [5] intention to honor her as well as her husband, and since WAN was involved in the naming the onus of not doing so also falls on him (a facsimile of relevant e-mails available upon request). Perhaps because the mismatch was not perceived as a problem as far as the rules were concerned, extending an apology to Eve was neglected, a situation further complicated by the untimely death of her husband, Alan. However, an apology and explanation were extended upon publication of Chan et al. [4], along with a request that they retract their proposed name change. Their reply was, after consultation with colleagues at the British Museum, they still believed the name had to be changed.

Acknowledgement

We are very much indebted to Mark J Grygier (Lake Biwa Museum, Japan) for numerous informative communications over this matter. While a current member of the International Commission on Zoological Nomenclature, he not only remained neutral in his responses to us, he recommended that our MS at least be reviewed by a Commissioner of the ICZN if not submitted as a petition to the Commission for a ruling. But considering the ICZN posting <<http://iczn.org/content/what-correct-original-spelling>> and the foregoing exposé of the rules involved, we see no reason to delay expressing our understanding of the matter before the name change spreads in the literature.

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