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Nomenclatural note

HUENESUCHUS IS AN OBJECTIVE SYNONYM OF *PRESTOSUCHUS* WHILE 'CLASS-GROUP NAMES' DO NOT EXIST IN AND ARE NOT REGULATED BY THE ICZN: A RESPONSE TO KISCHLAT

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ABSTRACT – A recent revision by Kischlat of the genus *Prestosuchus* (generally attributed to Huene) determined that it was an unavailable *nomen nudum* and proposed the new genus *Huenesuchus* to contain the species until then known as *Prestosuchus chiniquensis*, based on the assumption that no author made the name available after Huene. In fact, the name was made available by Kuhn. *Huenesuchus* and Huenesuchidae are objective junior synonyms of *Prestosuchus* and Prestosuchidae, respectively. Kischlat also introduced the new name Huenesuchia to replace Prestosuchia based on the incorrect assumption that unranked clades named after genera must be substituted if their eponyms are found to be *nomina nuda*, and the names Holosuchia and Loricatosuchia as substitutes for Suchia and Loricata respectively, based on an incorrect application of the Principle of Homonymy. The Principle of Homonymy, which applies to family-group, genus-group, and species-group names, does not apply to unranked clades or other Linnaean ranks, so Suchia and Loricata do not need to be substituted. Additionally, Kischlat characterized Holosuchia, Loricatosuchia, and Huenesuchia as 'class-group names,' a grouping that does not exist in the ICZN.

Keywords: nomenclature, *Prestosuchus*, *Huenesuchus*, Santa Maria Formation, Triassic.

AVAILABILITY OF HUENE'S *PRESTOSUCHUS*

Kischlat (2023) is correct that since Huene (1933, 1938, 1942) never designated a type species for "*Prestosuchus*", he did not make it an available genus name (ICZN, 1999). However, *Prestosuchus* is a widely used and recognized name that has been used numerous times since 1942. It is possible for a genus name that was unavailable due to a technicality when first published to be unintentionally made available by a subsequent author who inadvertently fulfills all requirements for a new name: that author then makes the genus available (Greenfield *et al*., 2020; McDavid, 2023; McDavid & Perkins, 2023). Simply because Huene did not make *Prestosuchus* available does not mean that it is unavailable to this day. Several publications (*e.g*., Kuhn, 1961; Barberena, 1978; Parrish, 1993) regarding *Prestosuchus* published between 1942 and 1999 do fulfill the requirements of Article 13 to name a new genus by specifying a type species and providing either a diagnosis or bibliographic reference to such a diagnosis (ICZN 1999, Art. 13; Greenfield *et al*., 2020). The first publication to fulfill the requirements of Article 13 is Kuhn (1961), which fixes *Prestosuchus chiniquensis* as the type-species ("genotypus" in Latin) and includes a bibliographic reference to Huene's (1942) description. The name *Prestosuchus* is therefore available from Kuhn (1961). As *Prestosuchus* and *Huenesuchus* have the same type species, the two genera are objective synonyms, and *Prestosuchus* has priority. The authorship of the genus *Prestosuchus* should be cited as Kuhn, 1961.

PRESTOSUCHIDAE AND HUENESUCHIDAE

Article 37.2 of the *Code* (ICZN 1999), cited by Kischlat (2023), requires that unavailable family group names be substituted by available synonyms or *nomina nova*. Under Article 13.2, family-group names must be formed from an available genus-group name to be available (ICZN 1999). As *Prestosuchus* was made available in 1961, Prestosuchidae, named in 1966 (Romer 1966:368), was based on a then-available name and is therefore available. The type-genus of Huenesuchidae is *Huenesuchus*, which is an objective synonym of *Prestosuchus*, the type-genus of Prestosuchidae, so Huenesuchidae is an objective synonym of Prestosuchidae.

HOLOSUCHIA AND LORICATOSUCHIA

Kischlat (2023) established Holosuchia and Loricatosuchia as *nomina nova* to replace the supposedly preoccupied names Suchia and Loricata. He terms these 'class-group names,' and while class ('classis' in Latin) is one of the original ranks used in Linnaean ranked taxonomy (Linnaeus 1735, 1758) the terms 'class' and 'class-group name' appear nowhere in the current *International Code of Zoological Nomenclature* (ICZN, 1999). Furthermore, a previous version of the *Code* (ICZN, 1985:267) specifically cites class as an example of a rank it does not regulate. The term 'class-group name' (originally 'taxons du groupe-classe' in French) originates from Dubois (1984:8), who uses it to refer to taxa above the family group, which he explicitly notes are not subject to the principles of priority and homonymy. Similarly, the 'Order/Class-group'

was proposed as a modification to the *Code* (ICZN, 1957) but never actually implemented (Hemming, 1958). Hemming (1958) even cites the existence of homonymous Loricata in different phyla (Mollusca and Chordata) as a reason the ICZN should not regulate the proposed 'Order/Class-group'.

Kischlat (2023) cites Article 1.2.2 as justification for establishing *nomina nova* to replace the supposedly preoccupied names. The actual text of this article reads "The Code regulates the names of taxa in the family group, genus group, and species group. Articles 1–4, 7–10, 11.1–11.3, 14, 27, 28 and 32.5.2.5 also regulate names of taxa at ranks above the family group." Kischlat (2023) claims that Article 10.6 'deals with the invalidity of junior homonyms'. Article 10.6 (ICZN, 1999) actually states that 'a name once available remains so irrespective of its invalidity as a junior synonym, a junior homonym, an unjustified emendation, an unnecessary substitute name, or a suppressed name, unless the Commission has ruled otherwise,' or more concisely that validly published names are to be treated as validly published in perpetuity regardless of their taxonomic validity unless specifically ruled unavailable by the Commission. The articles that actually deal with the invalidity of junior homonyms are Articles 52 through 60, and provisions cited therein. The Principle of Homonymy and its associated Articles do not apply at ranks above the family group (ICZN, 1999:Art. 1.2.2, 52–60).

It is commonplace and standard practice for different authors to use the same names for clades with different content or different phylogenetic definitions when they are broadly similar. Intensely studied clades may have several phylogenetic definitions and dozens of differing lists of species. For example, Dinosauria is one such clade of Archosaurs. It was defined by Sereno (1998) as (*Triceratops* + *Passer*), by Baron *et al*. (2017) as (*Triceratops* + *Passer* + *Diplodocus*) and by Langer *et al*. (2020) as (*Iguanodon* + *Megalosaurus* + *Cetiosaurus*). These three definitions are functionally equivalent, but as their specifiers are not identical, following Kischlat's logic, they would all require separate names, and none could use the name Dinosauria, since that had been used by Owen (1842) for a clade with no phylogenetic definition but with *Iguanodon*, *Megalosaurus*, and *Hylaeosaurus* as members. The *PhyloCode* (Cantino & De Queiroz, 2020), though not yet widely adopted (Schelesky-Prado *et al*., 2024), intends to regulate phylogenetic nomenclature of unranked clades. However, it does not attempt to regulate any clades established before 2020 and requires registration in a database (Cantino & De Queiroz, 2020). As Kischlat's names are not registered in the PhyloRegNum database and the names they intend to replace predate 2020, they are not regulated by the *PhyloCode* either. Rather than creating an excessive number of redundant clade names, authors should clearly specify which definitions they are using, either by listing specifiers (*e.g*., 'Dinosauria, Owen 1842 defined as (*Iguanodon* + *Megalosaurus* + *Cetiosaurus*)'), bibliographic citation to a published definition (*e.g*., 'Dinosauria, Owen 1842 *sensu* Langer *et al*., 2020'), or both.

PRESTOSUCHIA AND HUENESUCHIA

The unranked Huenesuchia proposed by Kischlat (2023) to replace Prestosuchia combines the issues of Huenesuchidae with the issues of Holosuchia and Loricatosuchia. Kischlat (2023) again describes it as a 'class-group name,' something that does not exist in the *ICZN*. (ICZN, 1999) As it is above the family group, it is not subject to the Principle of Homonymy, and there is no basis in the *ICZN* for its unavailability and replacement (ICZN, 1999:Art 1.2.2, 52–60). Many unranked clades are not named after genera, so even if *Prestosuchus* were unavailable, there would be no need to replace it, nor would there be any basis for its substitution in the *ICZN*.

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