



***Intellagama lesueurii* (Gray, 1831), the correct binomial combination for the Australian Eastern Water Dragon (Sauria, Agamidae)**

ANDREW P. AMEY^{1,3}, PATRICK J. COUPER¹ & GLENN M. SHEA²

¹Biodiversity, Queensland Museum, PO Box 3300, South Brisbane 4101, Australia

²Faculty of Veterinary Science B01, University of Sydney 2006 NSW, Australia

³Corresponding author. E-mail: andrew.amey@qm.qld.gov.au

The Eastern Water Dragon is a large, conspicuous agamid, well known to many inhabitants of eastern Australia. It was first described in the scientific literature as *Lophura lesueurii* by Gray (1831). Gray's allocation of this taxon to his earlier genus *Lophura* Gray, 1827, created for the species *Lacerta lophura* Shaw, 1802, does not mention that Cuvier (1829) had erected *Istiurus* for *amboinensis* Schlosser, 1768, which Cuvier treated as a senior synonym of *lophura*. Cuvier considered the generic name *Lophura* to be too similar to *Lophyrus* Latreille, 1802, a genus of conifer sawflies belonging to the family Diprionidae, hence the need for a new genus. Both Gray and Cuvier were evidently unaware that *Lophura* was unavailable as this name had already been assigned to a genus of phasianid birds (Fleming 1822). The Eastern Water Dragon has subsequently appeared in the taxonomic literature under the following synonyms: *Iguana paramatensis* Fitzinger, 1843; *Amphibolurus maculiferus* Girard, 1857; *Amphibolurus heterurus* Peters, 1866 and *Amphibolurus branchialis* De Vis, 1884. The combination *Physignathus lesueurii* was first used in 1845 by Gray in his *Catalogue of the Specimens of Lizards in the British Museum* and has been in use ever since. The only other generic name proposed for this taxon is *Intellagama* Wells and Wellington, 1985, by which the authors implied its distinctiveness from the other member of *Physignathus*, the Chinese Water Dragon *P. cocincinus* Cuvier, 1829. However, as their description provided no evidence to demonstrate that Australian water dragons are generically distinct from their foreign congener, this name has not been adopted by subsequent authors, and has been informally treated as a synonym of *Physignathus*.

In a recent paper by Townsend *et al.* (2011), evidence was presented showing that the genus *Physignathus* is not monophyletic, a conclusion supported by earlier molecular studies (Hugall *et al.* 2008; Macey *et al.* 2000; Schulte *et al.* 2003). These authors analysed DNA sequence data from 29 nuclear protein-coding genes for 47 iguanian taxa. They concluded that "...the southeast Asian species *P. cocincinus* (Cuvier, 1829) is the sister taxon to the entire Australian agamid radiation, which includes its sole congener, the Australian species *P. lesueurii*...". To rectify this paraphyly, they resurrected the genus *Istiurus*, to which Duméril and Bibron (1837) had assigned *cocincinus*, *lesueurii* and *amboinensis*, stating that the name is "not currently used and therefore is available". Regrettably, these authors overlooked the fact that Duméril and Bibron (1837) did not erect that generic name, which was instead created by Cuvier (1829). In his original description, Cuvier assigned only a single species, *Lacerta amboinensis* to *Istiurus* and thus *amboinensis* is the type species of this genus by monotypy. The resurrection by Poche (1903) of *Hydrosaurus* Kaup, 1828 as the earliest available generic name for *amboinensis* places *Istiurus* in the synonymy of this genus. In light of this, *Intellagama* Wells and Wellington 1985 is the earliest generic name available for *lesueurii* and *Intellagama lesueurii* (Gray, 1831) is the appropriate binomial combination.

Georges and Thomson (2010) have questioned the validity of Wells' more recent taxonomic contributions, (specifically Wells 2007a, b, c, 2009) on the grounds that they violate ICZN Articles 8 and 9 and Recommendation 8D. However, these arguments cannot be extended to the 1985 Wells and Wellington publication in which *Intellagama* was erected. As this was printed and distributed as multiple copies, it meets the minimum requirements of the Code (ICZN, 1999). The ICZN acknowledged this in 1991 when it refused to vote on a proposal to suppress the works of Wells and Wellington published up to that date, despite the "clear rejection by Wells and Wellington of virtually every tenet of the voluntary Code of Ethics which forms Appendix A of the Code" (ICZN 1991). Since this time, many of the generic names proposed by Wells and Wellington (1983, 1985) have gained widespread acceptance and now appear in many scientific and popular publications (for example, Bauer *et al.* 1997; Cogger 1996, 2000; Couper *et al.* 2006; Dolman & Hugall 2008; Donnellan *et al.* 2000; Gardner *et al.* 2008; Greer 1989, 1997; Greer & Cogger 1985; Kluge 1993;