Classification and Nomenclature of the Sandpipers (Aves: Arenariinae)

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The sandpipers, stints, knots, turnstones, and closely related shorebirds known by a variety of distinctive English group names are so widely diverse in morphology, behavior, and ecology that 26 species have been classified under no fewer than 19 available generic names. The two species of turnstones in the genus Arenaria are sufficiently distinctive as to have been treated as a family-group (International Commission on Zoological Nomenclature [ICZN] 1999, Art. 35, 36)—Arenariidae, Arenariinae, or Arenariini, depending on taxonomic viewpoint. The Surfbird, in the monotypic genus Aphriza, was included in that family-group until Jehl (1968) showed that it is more closely related to the “typical” sandpipers. As such, it became one of five distinctive monotypic genera allied with the large polytypic genus Calidris in the family-group Calidrididae, Calidridinae, or Calidridini (e.g., American Ornithologists’ Union [AOU] 1983, 1998; Dickinson 2003, Gill and Wright 2006; see Jehl 2010).

Calidris had early on become the senior synonym of 14 generic names in this group of 23 species (see synonymies in Peters 1934, Hellmayr and Conover 1948, AOU 1998), some of which were already senior to other generic names (see Ridgway 1919).

Gibson and Baker (2012) produced a DNA sequence-based phylogeny of the shorebird suborder Scolopaci, which includes the sandpiper genera and species under consideration here. They concluded that these sandpipers constitute one of eight monophyletic subfamilies in the shorebird family Scolopacidae. Other subfamilies are, using broad English group names, the shanks, phalaropes, snipes, woodcocks, dowitchers, godwits, and curlews.

One species, Xenus cinereus, was not included in any group and presumably must be treated as incertae sedis pending further study. Gibson and Baker (2012:71) found that the sandpiper subfamily consists of two clades, the two species of Arenaria in one, and 24 species in an assemblage containing the genus Calidris in the other.

Combining the turnstones and “typical” sandpipers into a single subfamily creates a classification novelty. The family-group name for the turnstones was originally based on the generic name Strepsilas Illiger, 1811 by Gray (1840), as Strepsilinidae (fide Bock 1994:138). Stejneger (1885:95) introduced the name Arenariinae, based on Arenarius Brisson, 1760, a name with many years priority over Strepsilas, and it thus became the proper name for the subfamily (see Ridgway 1919:42). For purposes of priority, Arenariinae dates from 1840 (ICZN 1999, Art. 40.2). The name Calidridinae was not established until 1849 (fide Bock 1994:138) and thus is a junior synonym of Arenariinae. However, both names can be used at the level of the tribe, a taxonomic category not used by Gibson and Baker (2012).

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Gibson and Baker (2012) suggested that the currently recognized monotypic genera Aphriza, Tryngites, Limicola, Eurynorhynchus, and Philomachus be merged into the genus Calidris. There is no problem with the first four of these, because the names are all clearly junior to Calidris Merrem, 1804 (see below). However, Philomachus (type species Tringa pugnax Linnaeus) and Calidris (type species Tringa calidris = Tringa canutus Linnaeus) were first proposed in the same work (Anon. = Merrem 1804) and no clear priority prevails (ICZN 1999: Art. 24). Although Gibson and Baker (2012) included P. pugnax among species of Calidris in their Fig. 1, they did not fulfill the requirements of the Code (ICZN 1999, Art. 24.2.1) to establish priority. I here act as first reviser and select Calidris as having priority over Philomachus when the species canutus and pugnax are considered congeneric.

Below I provide a sequential listing of the species in the subfamily Arenariinae, based on the phylogeny of Gibson and Baker (2012). For species in the enlarged genus Calidris that are type species of generic names now considered junior synonyms of Calidris, I indicate those generic names, with their authors and dates, taken from Peters (1934) and AOU (1998). Gibson and Baker (2012) emphasized that several nodes in the phylogeny of that