

Steppe Eagle *Aquila nipalensis* is monotypic

by William S. Clark

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Steppe Eagle *Aquila nipalensis* breeds in steppe habitats more or less continuously from Mongolia and central China west to eastern Europe, and is generally considered to comprise two subspecies. Western *orientalis*, reportedly differs from eastern *nipalensis* in its smaller size, paler coloration and lower frequency of pale nape patches on adults (Vaurie 1965, Dementiev & Gladkov 1966, Meyburg 1994, Ferguson-Lees & Christie 2001).

Hodgson (1833) described *A. nipalensis* as a new species. Cabanis (1854), in a footnote, described another new species of eagle as *Aquila orientalis*, based on specimens taken in European Russia. He stated in a terse, incomplete plumage description only that they are larger than Greater Spotted Eagles *A. clanga* and have rather distinct pale bands in the tail; one specimen had several pale nape feathers, which he attributed to a retained juvenile nape patch, such as shown by juvenile Lesser Spotted Eagle *A. pomarina*.

Hartert (1913) found that *Aquila orientalis* Cabanis, 1854, as well as *A. moglnik* (Gmelin 1770), *A. pallasii* (Brehm *et al.* 1856) and *A. glitschii* (Severtzow 1875), were all referable to the western form of Steppe Eagle, which he called *A. nipalensis orientalis*. He considered this form as impossible to reliably separate from the eastern form, but nevertheless treated *orientalis* subspecifically and presented mensural data to demonstrate that *orientalis* by sex averaged smaller. He felt that eastern adult specimens were darker than western ones because they were in fresher (hence darker) plumage. Hartert & Steinbacher (1936–38) stated that eastern Steppe Eagles are, on average, larger than western birds, albeit with much overlap, but found no other differences. They also considered *orientalis* a 'form' and clearly did not advocate recognition of two subspecies, as they listed no trinomials, a fact apparently overlooked by subsequent authorities.

I found that all adult individuals of Steppe Eagle, in collections and in photographs, from throughout the species' range vary little in their dark coloration and all have pale nape patches, as shown in Clark (1999). Clinal size variation is the only difference between eastern and western Steppe Eagles (Hartert 1913, Dementiev & Gladkov 1966, Ferguson-Lees & Christie 2001). Thus, I recommend that Steppe Eagle be considered monotypic, following the rationale of Amadon (1953) and Temple (1982) that clinal variations are insufficient for recognising subspecies.

Methods

I examined more than 300 specimens of Steppe Eagles in many museums, including more than 100 adults, as background for my papers on the species' taxonomic status



Figure 1. Adult Steppe Eagle *Aquila nipalensis* nape patches. Nape patches of adults vary (left to right) from small to medium to large to (top) very large, including the rear crown (William S. Clark)



Figure 2. Adult Steppe Eagles *Aquila nipalensis*, west to east. Underparts of adults vary from medium brown to dark brown. Collecting locations of these adults (left to right) are Romania, Ethiopia, Eritrea, Somalia, Israel (Palestine), Iran, Russia, Burma, Central Asia and Mongolia (William S. Clark)

(Clark 1992) and description of its age classes (Clark 1996). I have studied and photographed more than 100 adult Steppe Eagles throughout the range, in China, India, Israel, Kenya, Oman and South Africa. More recently, I examined three adult specimens in the US National Museum, in Washington DC (USNM), two from India (presumably *nipalensis*) and one from Kenya (presumably *orientalis*); five

adults in the bird collection of the National Museums of Kenya, in Nairobi (NMK), taken in Kenya (presumably *orientalis*); and ten adults of both taxa, from all parts of the range, in the American Museum of Natural History, New York (AMNH). I scored the colour of the underparts of each as dark brown, medium dark brown or medium brown, and judged their nape patches as absent, small (2–3 cm), medium, large or very large (if extending onto the crown). Adult Steppe Eagles have all secondaries with broad dark subterminal bands and dark undertail-coverts, as described and depicted in Clark (1996, 1999).

Results

All adult Steppe Eagles studied in the field, in photographs or the museum had pale nape patches, varying from small to very large and covering the entire nape and hindcrown (Fig. 1). Some small nape patches were not uniformly pale, being formed by pale tips to as few as ten central nape feathers. The size of the pale nape patches of the ten adults in AMNH varied: two had small patches, three medium patches, three large patches, and two had patches that were large but also extended onto the rear crown (Fig. 1). The sizes of the nape patches in the five adults in NMK were: two small, two medium and one very large; and the three adults in USNM had small (two) and large (one) patches.

The underparts of five of the ten adults in AMNH (Fig. 2) were judged dark brown, three medium dark brown, and two medium brown; they are arranged in Fig. 2 by collection location from west to east. There was no pattern of darker adults from either east or west, but there were more 'paler' medium brown adults from eastern locales. The adults in NMK and USNM were also dark brown, with slight variation but no clear geographic difference in overall coloration.

Discussion

One of the problems of validating racial differences in Steppe Eagle has been that most authorities considered them as races of Tawny Eagle *A. rapax*. Clark (1992) presented rationale for considering Steppe and Tawny Eagles as separate species.

Apparently all authorities (e.g. Vaurie 1965, Dementiev & Gladkov 1966, Ferguson-Lees & Christie 2001) ignored the contrary findings of Hartert & Steinbacher (1936–38) and followed Hartert (1913) in validating the subspecies and accepting published characters distinguishing the alleged races of Steppe Eagle, without examining specimens of adults to verify the validity of such purported characters. As Glutz von Blotzheim *et al.* (1971) covered just Europe, where only the western form occurs, they did not address the validity of Steppe Eagle races, but nevertheless stated that *orientalis* is found in Europe.

Previous to Clark (1996), adult plumage was not clearly defined. Steppe Eagles in fourth plumage (i.e. that prior to adult plumage) are recognisably different from earlier immatures and somewhat resemble adults, but are noticeably paler, usually do not possess pale nape patches, have pale areas in the undertail-coverts and retain

a few immature secondaries that lack broad dark subterminal bands (Clark 1996, 1999). It is possible that some earlier researchers confused such birds with adults, resulting in the theory that not all adults have pale nape patches. It is also possible that some specimens on which Cabanis based his description of *A. orientalis* were actually fourth-plumage eagles and not adult, although he mentioned that one adult had some pale nape feathers. Ellis (2003) reported fourth-plumage Steppe Eagles breeding in Mongolia, providing confirmation of breeding by paler eagles. Immature Steppe Eagles in their first three plumages also display colour differences on their underparts, but these are governed by individual variation and show no geographic pattern.

Alleged racial differences depicted in Sinclair *et al.* (1993) are incorrect. I have never seen an adult Steppe Eagle with grey-colored upperparts, as shown for both races on p.94 of the latter guide. Size differences shown in that guide are intersexual and not the product of geographic origin. In any case, it is unlikely that eastern Steppe Eagles winter in Africa.

Temple (1972) argued that the geographic separation of races which possess merely clinal variation in characters or size is necessarily arbitrary, and that such characters are insufficient justification for recognising subspecies; he recommended that the western taiga race of Merlin, *Falco columbarius bendirei*, be considered a synonym of the eastern taiga race, *F. c. columbarius*, as the only difference is a cline in overall coloration, with eastern birds being darker. Similarly, Amadon (1953) wrote 'I am in sympathy with the present trend to suppress naming of continental races based on gradual clines'. Thus, I recommend that Steppe Eagle be considered monotypic, as the only geographic variation is a clinal difference in size, with eastern birds being marginally larger.

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A replacement name for *Xiphorhynchus fuscus brevirostris* (Pinto 1938)

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Based on the suggestions of García-Moreno & Cardoso da Silva (1997), Lesser Woodcreeper *Lepidocolaptes fuscus* (Vieillot 1818) is now placed in the genus *Xiphorhynchus* Swainson 1827. This revision received support from Irestedt *et al.* (2004) and Aleixo (2004), and was also followed by Dickinson (2003) and Marantz *et al.* (2003). Recent examination of the latter works has identified a duplication of names within the genus *Xiphorhynchus* (Dendrocolaptidae), as the trinomial *brevirostris* is now used for two taxa due to the amalgamation of selected taxa, formerly ranked in two genera, into a single genus.

When García-Moreno & Cardoso da Silva's revision is accepted, use of the trinomial *Xiphorhynchus fuscus brevirostris* (Pinto 1938: 384) becomes erroneous, as the name is preoccupied by *X. chunchotambo brevirostris* (Zimmer 1934: 18), a subspecies of Tschudi's Woodcreeper, and as such it is unavailable. The change from *X. ocellatus brevirostris*, Ocellated Woodcreeper, for Zimmer's taxon, follows the revision proposed by Aleixo (2002) and supported by Marantz *et al.* (2003).

Under all recent placements Pinto's name is unavailable for this taxon following the code of the ICZN (1999). *Lepidocolaptes fuscus brevirostris* Pinto therefore must either be replaced by using a pre-existing name or by providing a new name (ICZN articles 23.1 and 60.3). A lengthy literature review indicates that Pinto's name *Lepidocolaptes fuscus brevirostris* has no available junior synonyms, as it has been a stable taxon. If *Xiphorhynchus fuscus* were to revert to the genus *Lepidocolaptes* then the trinomial would not require such action and it could



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