



CLIFF DORSE

# elevating gamebirds

New francolin and spurfowl taxonomy

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Gamebirds have been domesticated for food production and for ornamental aviculture for centuries, yet they remain a mostly under-appreciated group of birds. This might be because they can be seen along roadsides, in open farmlands, urban fringes and even within towns and gardens. The gamebirds have representatives on all continents except Antarctica and, together with the ducks and geese, form the basal group among the Neoaves. The Galliformes comprise nine major groups of terrestrial gamebirds: megapodes, cracids, guineafowls, grouse, turkeys, pheasants, partridges (including francolins and spurfwowls), and Old World and New World quails.

Studies combining the genetics and anatomy of living species and fossils suggested that pheasants, partridges, quails, spurfwowls and francolins are not natural evolutionary groups, but rather mosaics of evolutionarily unrelated species. Even the best-known gamebird and the wild ancestor of the domestic chicken, the Junglefowl *Gallus gallus*, was moved on the gamebird evolutionary tree from being with the pheasants to a branch that includes a mix of 'francolins' and 'partridges'.

Traditionally, the largest group of African gamebirds, the francolins, was classified with partridges in the tribe Perdicipini within the family Phasianidae, although the only anatomical feature that supports this grouping is that they all have 14 tail feathers. The 41 species of francolins, 36 from Africa and five from Asia, were placed in a single genus, *Francolinus*, but we now know that the genus contains two quite distinct lineages: the 'true francolins' and spurfwowls. The distinction between these groups is apparent in their plumage, escape flight behaviour and vocalisations. Francolins have quail-like upperparts while spurfwowls have streaked or vermiculated back feathers. Francolins typically crouch and sit tight before flushing when disturbed, whereas spurfwowls tend to run for cover. And francolins have musical, whistling calls



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compared to the raucous crowing or cackling calls of spurfwowls.

The African francolins are related to the Asiatic francolins, the Junglefowl and Bamboo Partridge *Bambusicola thoracica*. Since they link with Asiatic francolins, including the Black Francolin *Francolinus francolinus*, which was the first francolin described to science, they have retained the common English name 'francolin'. By comparison, spurfwowls group with quails and a range of northern hemisphere 'partridges'. The name 'spurfowl' was already in use for the Yellow-necked Spurfowl *Pternistis leucoscepus* of East Africa and so offered an alternative name for the species with no close affinities to the true francolins.

Recent research by a team from the FitzPatrick Institute of African Ornithology, UCT, and the University of California, Berkeley, was based on morpho-behavioural and genetic evidence and tested the classification of spurfwowls and francolins (Mandiwana-Neudani et al. 2019. *Ostrich* 90(2 & 3)). Historically, four sub-groups were recognised within the spurfwowls: the bare-throated, montane, scaly and vermiculated spurfwowls. We support these sub-groups, but recommend the recognition of only one genus, *Pternistis*, comprising 25 species. This increases

above Plain-bellied Francolin *Campocolinus hubbardi* (male shown) has been elevated to a full species.

opposite Also elevated to a full species, Cranch's Spurfowl *Pternistis cranchii* was a subspecies of *P. afer*.

the currently recognised number of species by two and decreases the number of subspecies from 59 to 16.

The Scaly Spurfowl subspecies *Pternistis squamatus schuetti* has been elevated to a full species and is now known as Schuett's Spurfowl *P. schuetti*. It occurs in the eastern Democratic Republic of the Congo (DRC), extending east to Uganda, Ethiopia, Kenya, Tanzania and Malawi. It resembles the Scaly Spurfowl, but is less vermiculated overall, the scaly pattern on the lower neck is less clearly defined and each feather has a deep red-brown centre. Somewhat surprisingly, its closest relative is the Grey-striped Spurfowl *P. griseostriatus* of Angola.

The other new spurfowl is the Red-necked Spurfowl subspecies *P. afer cranchii*, which has been elevated to a full species and is now known as Cranch's Spurfowl *P. cranchii*. This less distinctly marked 'new species' is distributed across the southern DRC, northern Angola, northern Zambia, >



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above *Elgon Francolin* *Scleroptila elgonensis*, here on Mount Kenya, has been elevated from *S. psilolaema*.

below *Schuett's Spurfowl* *Pternistis schuetti*, previously a subspecies, is now a full species.

opposite *Grant's Francolin* *Ortygornis grantii* is one of three species in the new genus *Ortygornis*.



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Malawi, western Tanzania, Kenya and Uganda. This leaves the Red-necked Spurfowl with three subspecies (*P. a. afer*, *humboldtii* and *castaneiventer*) distributed along the lower Cunene River bordering Namibia and Angola in the west, and through eastern Tanzania, Mozambique and eastern South Africa.

The francolins were also thought to contain four sub-groups: the spotted, striated, red-tailed and red-winged francolins. We support these sub-groups and propose the five relevant genera: *Francolinus*, *Ortygornis*, *Campocolinus*, *Peliperdix* and *Scleroptila*. The Forest (Latham's) Francolin is isolated in the genus *Peliperdix* as a result of its overall differences with the red-tailed group. An interesting shuffle is the shifting of Ring-necked Francolin *Scleroptila streptophora* from the striated francolin group to a basal position within the red-winged francolins (*Scleroptila* spp.).

Perhaps most exciting for birders is that the study recommends elevating no fewer than 14 subspecies to species

level (see box opposite) and lumping other subspecies into more inclusive entities, with only 14 subspecies in contrast to 52 previously. The bantam-like Crested Francolin is designated a new genus, *Ortygornis*, and split into three species. The Crested Francolin *O. [sephaena] sephaena* is now confined to a band across southern Angola, northern Namibia, Botswana, Zambia, Zimbabwe and north-eastern South Africa. Kirk's Francolin *O. rovuma* has two subspecies: *O. r. rovuma* in coastal Kenya, Tanzania and Mozambique and *O. r. spilogaster* in eastern Ethiopia and Somalia. The third species, Grant's Francolin *O. grantii*, is found in southern Sudan and western Ethiopia through to north-central Tanzania.

The Orange River Francolin also offers a new species, the Kunene Francolin *Scleroptila jugularis* in southern Angola and northern Namibia, while the Orange River Francolin is now confined as two subspecies, *S. levalliantoides levalliantoides* and *S. l. pallidior* in South

Africa and Botswana respectively. The closely related Archer's Francolin *S. gutturalis* in East Africa is supported as a full species. Crawshay's Francolin *S. crawshayii* from north of the Zambezi River is elevated from the Red-winged Francolin *S. levallantii*, which now becomes a southern African endemic.

The Coqui Francolin complex in the new genus *Campocolinus* has five newly elevated species: Pale-bellied Francolin *C. spinetorum*, Bar-bellied Francolin *C. maharao*, Plain-bellied Francolin *C. hubbardi*, Thika Francolin *C. thikae* and Stuhlmann's Francolin *C. stuhlmanni*, while the Coqui Francolin retains four subspecies: *C. coqui coqui*, *C. c. ruahdae*, *C. c. vernayi* and *C. c. kasaicus*.

Other francolin changes see Chestnut-breasted Francolin *Campocolinus dewittei* elevated from being a subspecies of White-throated Francolin *C. albogularis*; Elgon Francolin *Scleroptila elgonensis* elevated from Moorland Francolin *S. psilolaema*; and both Ulu Francolin *S. uluensis* and Rufous-throated Francolin *S. whytei* elevated from Shelley's Francolin *S. shelleyi*.

The enigmatic Nahan's Francolin *Ptilopachus nahani* is neither a spurfowl nor a francolin, but rather a sister species to the Stone Partridge *P. petrosus*. Even more surprising is that these two African 'partridges' are relatives of the New World Quails (Odontophoridae) and thus are placed in their own subfamily, Ptilopachinae.

If these recommendations are widely adopted, there will be three new species in southern Africa: Kunene Francolin in northern Namibia, Kirk's Francolin in central Mozambique and Stuhlmann's Francolin in central to north-eastern Zimbabwe and Mozambique. The subregion will also acquire two more endemic francolins in addition to Grey-winged Francolin *S. afra*, namely the Orange River and Red-winged francolins.

I thank my colleagues and co-authors Tshifhiwa Mandiwana-Neudani, Tim Crowe and Rauri Bowie for interesting times working on these gamebirds. ♦



#### NEW SPURFOWL AND FRANCOLIN SPECIES

Scientific name	Common English name
<b>Scaly Spurfowls</b>	
<i>Pternistis schuetti</i>	Schuett's Spurfowl
<b>Bare-throated Spurfowls</b>	
<i>P. cranchii</i>	Cranch's Spurfowl
<b>Striated Francolins</b>	
<i>Ortygornis grantii</i>	Grant's Francolin
<i>O. rovuma</i>	Kirk's Francolin
<b>Red-tailed Francolins</b>	
<i>Campocolinus dewittei</i>	Chestnut-breasted Francolin
<i>C. spinetorum</i>	Pale-bellied Francolin
<i>C. maharao</i>	Bar-bellied Francolin
<i>C. hubbardi</i>	Plain-bellied Francolin
<i>C. thikae</i>	Thika Francolin
<i>C. stuhlmanni</i>	Stuhlmann's Francolin
<b>Red-winged Francolins</b>	
<i>Scleroptila crawshayi</i>	Crawshay's Francolin
<i>S. elgonensis</i>	Elgon Francolin
<i>S. gutturalis</i>	Archer's Francolin
<i>S. jugularis</i>	Kunene Francolin
<i>S. uluensis</i>	Ulu Francolin
<i>S. whytei</i>	Rufous-throated Francolin