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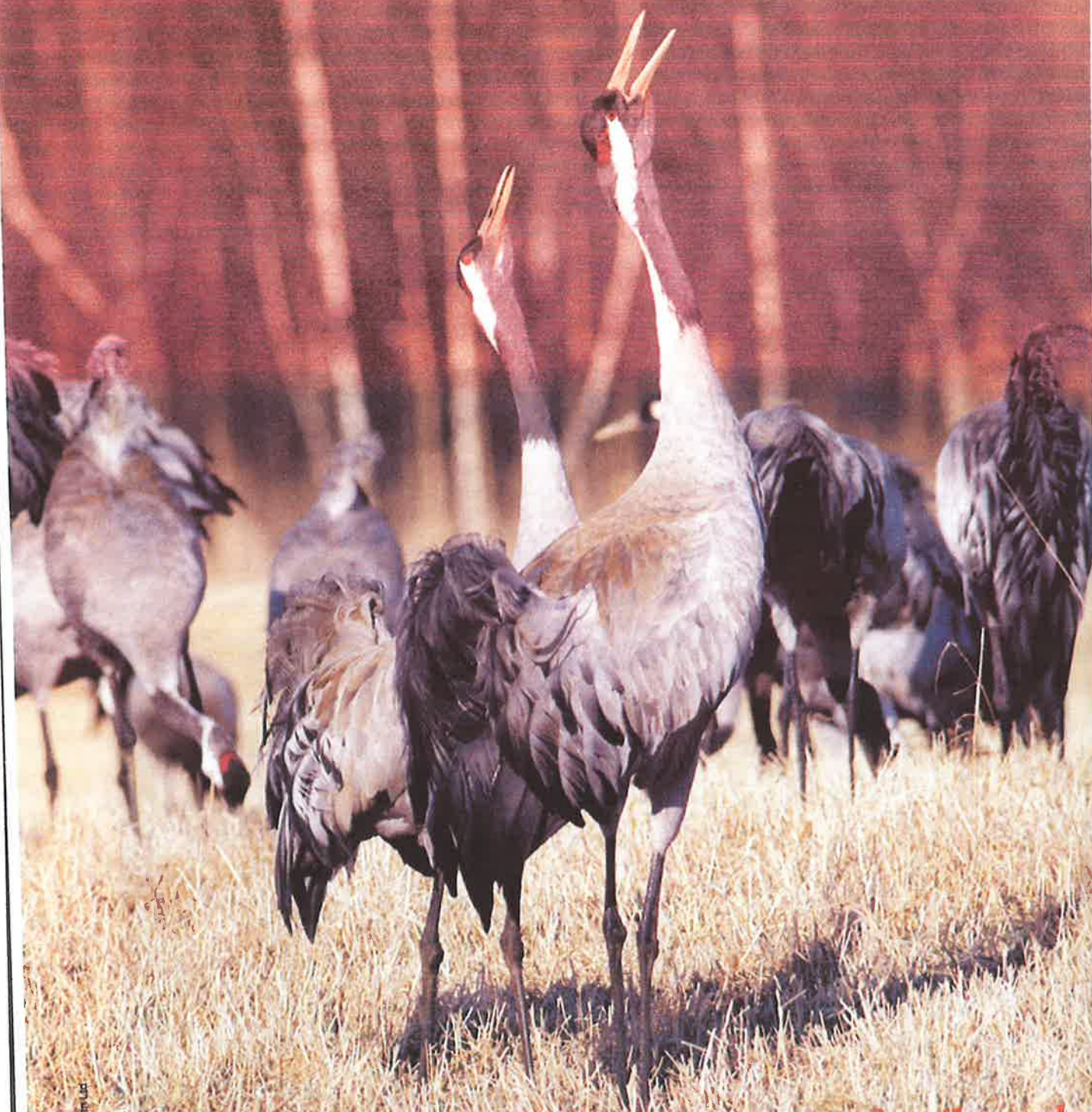
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The Calling of Cranes Secrets of Sumba




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The Calling of Cranes



Curt Meine describes this charismatic family and the conservation issues that affect them.

Several times each spring and fall, an unusual family conversation can be heard across the farm fields and morainal hills of south-central Wisconsin. The opening remarks come from above, as a flock of migrating Sandhill Cranes announces its arrival in the skies over the International Crane Foundation (ICF). Their calls prompt other cranes in the ICF's captive breeding facility to raise their voices in reply. As the sandhills drop in to pursue the discussion, the excitement spreads like a rumour from crane pen to crane pen. The heads of a hundred and fifty cranes lift up, long necks bend back, and the bugles cut loose.

This conversation could not occur anywhere else in the world. This is the only place on the planet where all the members of the *Gruidae* family are present. ICF, in its capacity as the world centre for the conservation of cranes and their natural habitats, houses representatives of all fifteen of the world's crane species, from the five continents where they occur (only Antarctica and South America lack cranes). These birds produce new generations of cranes for reintroduction, research, and education, and provide security against the threat of extinction.

In the ensuing uproar of crane trumpeting, the discerning human ear can make out the family's varied voices. The more 'primitive' species – the Grey- and Black-crowned Cranes from Africa – speak in shorter, flatter phrases. The Whooping, Red-crowned and Sarus Cranes, who have evolved elongated tracheas, speak in bright, stentorian tones, while the Siberian and Wattled Cranes occupy the higher registers. Somewhere in the middle, the wild Sandhill Cranes give forth their coarser call.

For a human being eaves-dropping on this crane-talk, an undercurrent of irony can be heard amid the cranes' din. Having spent the eons diversifying from their common ancestor, all the fifteen species are now brought together again by their increasing vulnerability. The discourse between wild and captive cranes is thus an echo of our own discussions about how to maintain a biologically diverse world, and how to develop a viable relationship between wildness and human civilisation.

Throughout history, we find cranes at the leading edge of such discussions. Aldo Leopold, in his textbook *Game Management* (1933), cited Kublai Khan's provision of food patches for cranes and other birds near Changanor in the 13th century as 'the first clear record of a well-rounded system of ... management for conservation purposes'. In the 1930s, Leopold himself encountered the then-rare Sandhill

Cranes in Wisconsin (not far from ICF's present site) and became deeply intrigued by this 'symbol of our untamable past'. Partly as a result of this encounter, Leopold's wildlife conservation philosophy began to expand beyond a concern for game animals and their habitats, and to embrace all members of the biological world.

The saga of the Whooping Crane – the decline to just 16 birds in the early 1940s, the discovery in 1954 of the Canadian nesting grounds of the last wild flock, the long difficult process of recovery to its current level of 150 wild birds – is one of conservation's great epics, and provides a key early example of international cooperation on behalf of endangered wildlife.

The prominence of cranes in conservation matters is due in part to the fact that, as a family, they are creatures of superlatives. They are among the most ancient of bird families: the Sandhill is generally considered to be the most ancient of the world's extant bird species. The Sarus Crane of India and Southeast Asia is, at nearly 2 metres, the tallest flying



Grey-crowned Crane (above) and Black-crowned Crane are probably the most beautiful species in the group.

Common Cranes (opposite).

F. Schneldermeyer/Oxford Scientific Films

bird in the world. Cranes are long-lived: the longest recorded lifespan of an individual bird – 82 years – was a captive Siberian Crane.

While beauty defies such measures, cranes are also recognised in many cultures as being among the most striking creatures on earth. Their size, form, plumage, vocalisations, and the family's propensity for dancing, have made them special symbols wherever they occur. They appear in paintings, sculpture, ceramics and textiles, and in stories, poems and myths. Three species – the Blue, Grey-crowned, and Black-crowned Cranes – are national birds of South Africa, Uganda, and Nigeria respectively. They have symbolised luck, longevity, and fidelity in Japan, nobility in South Africa, grace and kinship with nature in Australia, and courage among native Americans.

Cranes are found in over 110 countries. East Asia, with eight species (the Red-crowned, Black-necked, Sarus, Common, Hooded, White-naped, Siberian, and Demoiselle), is the centre of crane diversity. Two species each occur in Australia (the Brolga and Sarus), North America (the Whooping and Sandhill), and Europe (the Common and, in southeastern Europe, Demoiselle Crane). Six species are permanent or part-time residents of Africa (the Blue, Wattled, Grey-crowned, Black-crowned, Common, and Demoiselle). The northern species and populations are migratory. The southern species – the Brolga, Sarus, Wattled, Blue, and Crowned Cranes and the southern subspecies of the Sandhill



W. Shattil & B. Rozinski/Oxford Scientific Films

Sandhill Cranes in sunrise fog.

Crane in Florida, Mississippi, and Cuba – are non-migratory.

Most of the cranes are wetland dwellers, although they vary in the degree to which they use other habitats. The Siberian, Whooping, Red-crowned, and Wattled Cranes are the most specialised for life in the marshes, bogs, and deltas. Other species, such as the Sandhill, Common, and Hooded Cranes, while still primarily wetland residents, also make liberal use of grain fields (especially during migration). The Blue and Demoiselle Cranes, with their shorter bills and statures, are adapted to life in the grasslands, although both favour nesting sites near wetlands.

The size, habitat needs, and migratory habits of cranes make them vulnerable to a wide range of threats. The loss and alteration of wetlands worldwide is the greatest of these, affecting breeding grounds, migration staging areas and stopover points, wintering grounds, and roosting areas, as well as the permanent homes of the non-migratory species. Wetlands are degraded through a number of processes: drainage, conversion to agriculture, dam construction, water diversion, urban expansion, pollution, over exploitation of fish and wetland vegetation, coastal shoreline development and erosion. Cranes have thus assumed yet another, newer symbolic role around the world: as 'flagship species' in the effort to protect and restore the biological diversity and ecological health of wetland ecosystems.

Even where habitats are secure, cranes face other important threats. Poisoning, both intentional and unintentional, has been reported as a cause of mortality in most species that

use agricultural fields, South Africa's Blue Cranes being the most heavily affected. Although cranes are legally protected in most countries where they occur, hunting, poaching, and live trapping can pose important threats. The dwindling of India's wintering flock of Siberian Cranes, from some 200 birds in the early 1980s to just 5 individuals a decade later, is in part due to increased hunting pressures along their migration route. Once populations decline to such a low level – a situation also faced by the Whooping Crane and the Cuban and Mississippi subspecies of the Sandhill Crane – they become vulnerable to additional genetic and demographic problems, and to the effects of catastrophic events such as tropical storms.

As a result of these and other threats, seven of the fifteen crane species are considered globally threatened. Others, though still abundant, are declining. Furthermore, several subspecies and populations of cranes face greater degrees of threat than do the species as a whole.

In an effort to define better the degree of threat, assess conservation needs, and coordinate the wild and captive management of cranes, BirdLife International's Crane Specialist Group, the International Crane Foundation, and several other organisations have recently prepared a Crane Conservation Assessment and Management Plan (or CAMP). Using a new system for categorising degrees of threat, crane experts from around the world grouped the cranes into four categories: safe, vulnerable, endangered, and critical. Those groups found to be most critically threatened were the central

and western populations of the Siberian Crane, the Cuban and Mississippi Sandhill Cranes, the Whooping Crane, the Ethiopian population of the Wattled Crane, the north-west African population of the Demoiselle Crane, and the Blue Crane. Results from the CAMP are now being used to develop a Crane Action Plan to address the threats to cranes worldwide.

Despite the vulnerable state of many populations, cranes are in a sense more fortunate than many other endangered forms of wildlife. Their high aesthetic and cultural value has brought them much attention from conservationists, and they are among the most intensively studied families of organisms in nature. Although there is much that we do not know about certain species (for example, the Black-necked Crane), and certain aspects of crane biology (for example, the migration routes of many populations), cranes are nonetheless 'ahead of the game'. Unlike so many groups of plants and animals, much of the information that is needed to design conservation programmes is already available.

Cranes also have the benefit of their 'own' foundation. The International Crane Foundation has, in the twenty years since its establishment, provided the focal point for a far-flung network of crane researchers and conservationists. Working with and through colleagues around the world, ICF helps to coordinate captive breeding and reintroduction programmes. This, however, is only one of many components that must go into a balanced conservation programme. ICF also organises regular crane workshops (the latest, on African cranes, was held in Botswana in August 1993), sponsors research on cranes and their wetland habitats, administers public education and professional training programmes, and assists in the design of sustainable development and habitat management projects.

Despite the advantages that cranes possess in confronting the threats to their continued survival, the conservation of this family of birds will not be easy. The trend in many species and populations is downward. The pressure on their habitats will only increase as human populations continue to expand. And despite great effort, no self-sustaining crane population has yet been artificially re-established in the wild.

But in the face of these realities, it is salutary to listen to the Sandhill Cranes that initiate the excited clamour at ICF. Only a few decades ago, their voices were all but silenced in the state of Wisconsin. Reduced to just a few dozen remnant wild birds in the 1930s, the Sandhill Crane has now reclaimed this portion of its ancestral home, thanks to a combination of habitat restoration and effective hunting restrictions. In this year's annual crane count in Wisconsin, involving 2,500 people, more than 11,000 cranes were recorded. As the migrating Sandhill Cranes leave ICF behind, their insistent calling provides a message of hope and survival for this much-loved and celebrated family.

Sandhill Crane	<i>Grus canadensis</i>	Blue Crane	<i>Grus paradisea</i>
Grey-crowned Crane	<i>Belearica regulorum</i>	Black-necked Crane	<i>Grus nigricollis</i>
Black-crowned Crane	<i>Belearica pavonina</i>	Common Crane	<i>Grus grus</i>
Whooping Crane	<i>Grus americana</i>	Hooded Crane	<i>Grus monacha</i>
Red-crowned Crane	<i>Grus japonensis</i>	White-naped Crane	<i>Grus vipio</i>
Sarus Crane	<i>Grus antigone</i>	Demoiselle Crane	<i>Grus virgo</i>
Siberian Crane	<i>Grus leucogeranus</i>	Brolga	<i>Grus rubicunda</i>
Wattled Crane	<i>Grus carunculatus</i>		

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The Blue Crane (top) occurs only in open grassy habitats in the upland interior of South Africa, with a small, disjunct population in Namibia.

Wattled Crane (centre), a large shy species that occurs in wetlands in Africa, and is globally threatened.

Siberian Crane (bottom) is one of the most critically threatened species in the group. It breeds in two discrete areas in Siberia: birds from the western area winter at Bharatpur, India, those from the east migrate to China.