INDIAN WATER-BIRDS and their habitat

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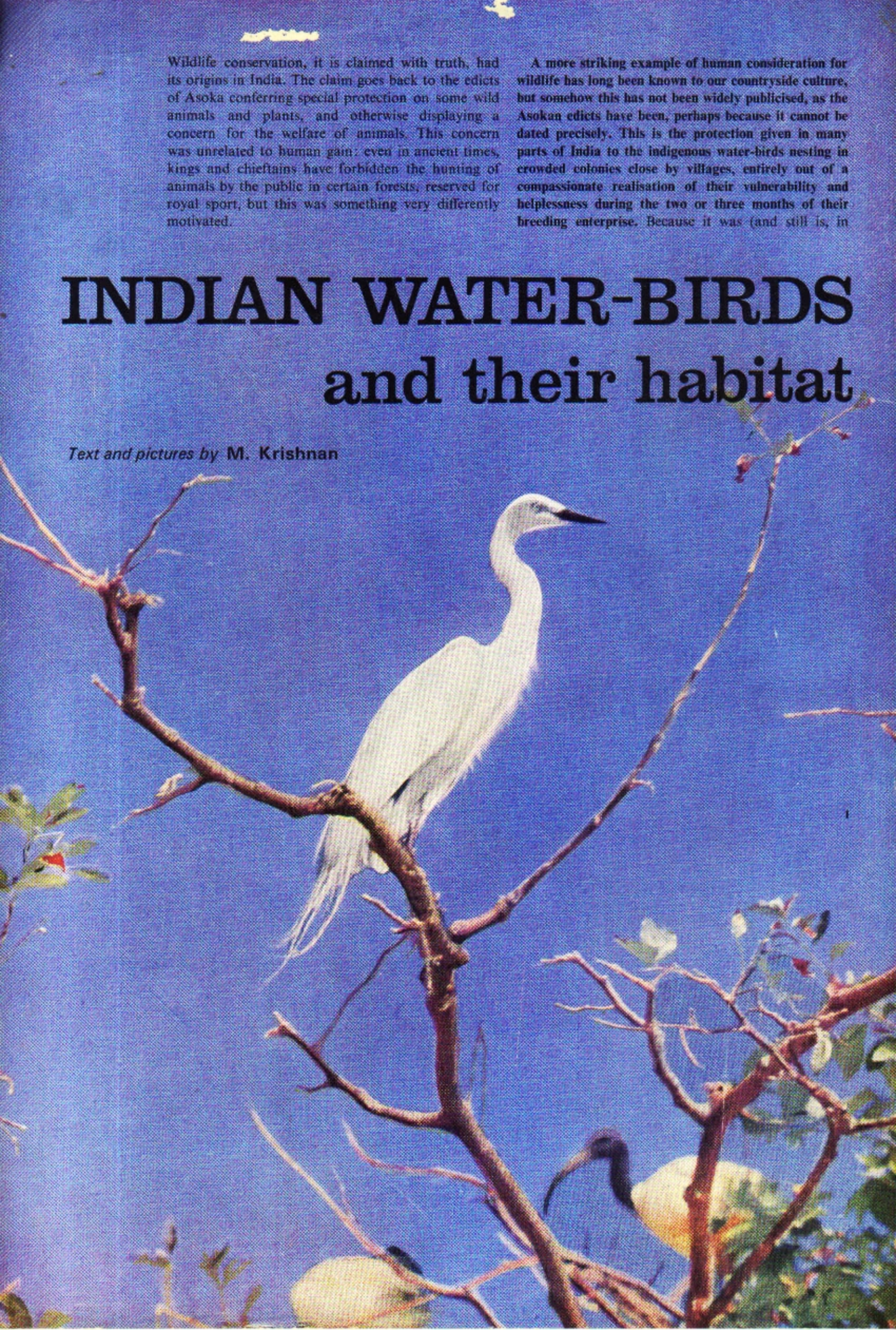
Wildlife conservation, it is claimed with truth, had its origins in India. The claim goes back to the edicts of Asoka conferring special protection on some wild animals and plants, and otherwise displaying a concern for the welfare of animals. This concern was unrelated to human gain: even in ancient times, kings and chieftains have forbidden the hunting of animals by the public in certain forests, reserved for royal sport, but this was something very differently motivated.

A more striking example of human consideration for wildlife has long been known to our countryside culture, but somehow this has not been widely publicised, as the Asokan edicts have been, perhaps because it cannot be dated precisely. This is the protection given in many parts of India to the indigenous water-birds nesting in crowded colonies close by villages, entirely out of a compassionate realisation of their vulnerability and helplessness during the two or three months of their breeding enterprise. Because it was (and still is, in



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1. *Median Egret in nuptial finery (overleaf).*
2. *Indian Shag: Bharatpur.*
3. *Darter on deadwood: Periyar Sanctuary.*
4. *Spoonbills nesting on babool: Bharatpur.*
5. *Nesting Openbills: Ranganathitoo, Karnataka.*
6. *White Ibis and young.*
7. *Painted storks nesting on babool: Bharatpur.*
8. *Spoonbills nesting along with egrets.*

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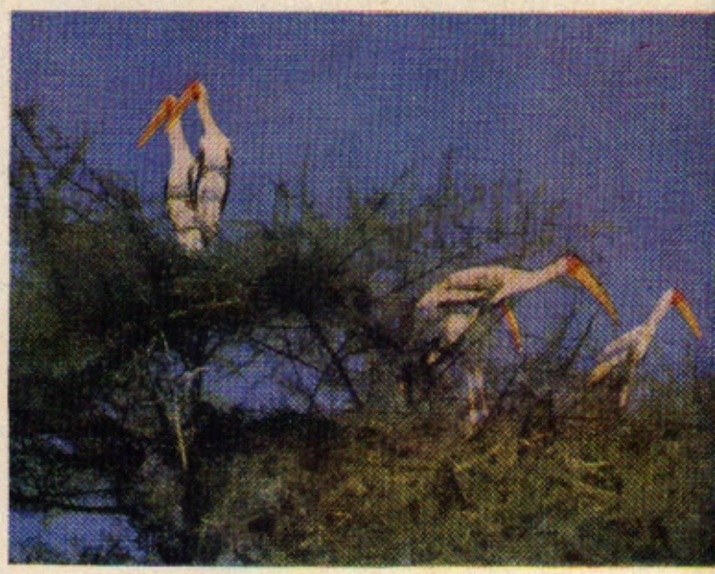

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9. *Painted Stork bringing in Mitragyna parvifolia leaves with which to line its nest: Bharatpur.*

places) a protection accorded by ordinary rustics, and not by an enlightened monarch, and because it was common to the rural sentiment of many parts of India and, moreover, an effort sustained over generations, it is specially noteworthy, but can be traced back only to a few centuries.

Before detailing specific instances of such breeding colonies protected by village sentiment, a brief general account of our indigenous water-birds and their breeding habits would be helpful. India is rich in bird life — almost 2,000 different kinds of birds are known here. The majority of them live and breed here, but quite a few are migratory, visiting us late in the year when it is winter in their cold, northern homes. Many of these migrants are water-birds or waterside-birds, and the first thing to know is to distinguish between them and indigenous water-birds. This is not difficult. The migrants come to our country after breeding in their northern homelands, and are no longer in nuptial finery but in what is termed eclipse plumage, that is, in a less arresting plumage than when breeding. They do not breed during their long sojourn with us, for several months, and leave for their homes again when it is spring.

Well-known migratory water-birds that visit us each year are geese, ducks of many kinds, two kinds of pelicans, some storks, cranes, a host of plovers, sandpipers and other waders, and crakes, and many terns and gulls.

Our indigenous water-birds include the grey pelican, cormorants, the darter, egrets, grey herons, pond herons and night herons, some storks, the spoonbill and the white ibis (these are the main kinds that nest together in mixed heronries), the sarus crane, lapwings, waterhens, moorhens and coots and jacanas, besides many waterside-birds. Of course kingfishers, wagtails (most of them migratory) and the little grebe are also water-birds, but only those birds that breed together in mixed heronries are considered here.

Thousands of them may breed in a congested, mixed nesting colony, usually sited in trees standing in shallow water, often in a village tank. This unreasoned, instinctive preference for close company and the insulation of water no doubt benefits them, providing a measure of protection from birds of prey and land predators. However, they are singularly exposed to risks during the arduous months of their breeding effort. The effort is considerable. Although they build only simple " stick nests ", even such nests involve the laborious gathering of thorny twigs and other nesting material bit by bit, and need to be periodically replenished and lined, usually serving to raise more than one brood during a season.

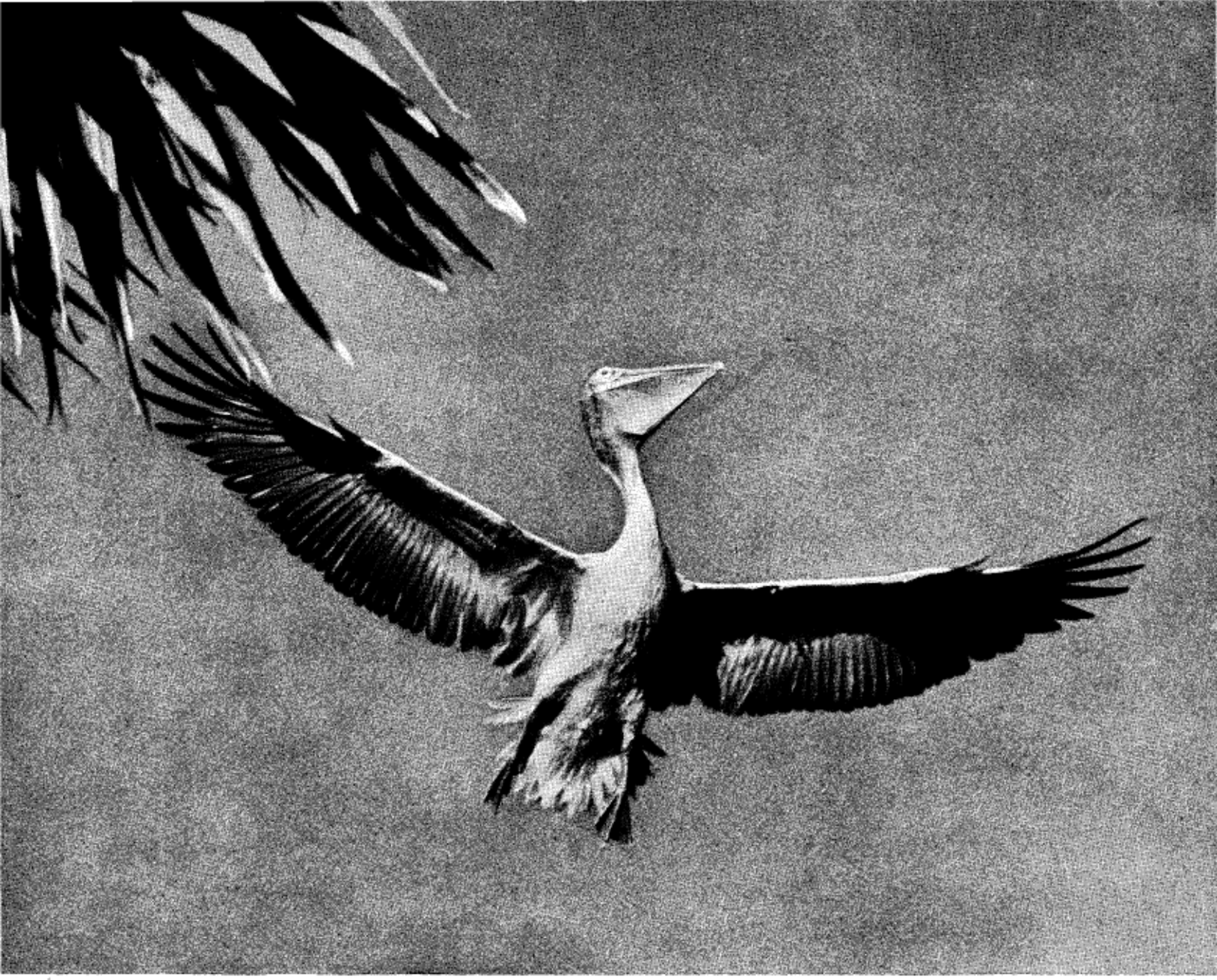
The feeding grounds, shallow spreads of water teeming with fishes, amphibians, molluscs and crustaceans, and other aquatic small fry, may be miles away, and a great many flights to these grounds and back to the nest are undertaken each day (and with some species, by night as well) to find the food needed for the parent birds and their insatiable young — nestling water-birds may consume as much as their own weight of food (brought home by their parents in their crops and regurgitated at the nest) each day, and grow rapidly, almost visibly.

Crowded together in a few trees and tied to their eggs and young by powerful instincts, breeding water-birds are an easy prey to hunters, and it is the vigilance of the villagers living near by that has assured them of freedom from human disturbance and predation year after year. When so protected and undisturbed, these birds return each year to the same nesting site, for centuries together.

The well-known Vedanthangal sanctuary in the Chingleput district of Tamil Nadu provides detailed documentary evidence on the point. In 1799 the villagers of the then-obscure hamlet of Vedanthangal appealed to Lionel Place, the first Collector of the district, to arm them with written authority to protect the vast numbers of water-birds nesting each year in a grove in the heart of their village tank, as they had been doing from time immemorial, against European hunters, and Place gave them a comprehensive 'cowle' (written authority) recognizing their right to do so. Till

10. *Grey Heron in flight: the ample wings, retracted neck and the pattern of black streaks on the lower neck are distinctive. A bird with a worldwide distribution.*

11. *The Darter or 'snake-bird'. When in the water only the sinuous, kinked neck and narrow, sharp billed head, so suggestive of a water snake raising its head, are above the surface. Hence the name 'snake-bird'.*



12. *Grey Pelican setting out for its feeding grounds.*

1936, when the government proclaimed Vedanthangal a water-bird sanctuary and took over the protective responsibility, and even till 1956 when they did so again, it was the villagers that zealously protected the nesting colony.

The Rev. Howard Campbell writes that in 1890 he visited remote Buchupalle in Cuddapah district and found a great colony of grey pelicans and painted storks nesting together in neem and tamarind trees in the hamlet: " The people of the village, " he goes on, " were very much averse to any interference with the nests. The birds trusted them and they would not have them injured, they said." Aredu pelicanry in the West Godavari district of Andhra Pradesh, only recently proclaimed a sanctuary, provides another instance of rural vigilance safeguarding the nesting birds. I know other small, remote breeding colonies protected even today by rural sentiment.

Where is the Buchupalle nesting colony today? It has been abandoned, as a great many other nesting colonies also have, with human occupation of the land and the inexorable increase in our population. I myself have watched quite a few of these colonies go. Some of the more important and populous mixed heronries have been established as water-bird sanctuaries — examples are Vedanthangal, Ranganathittoo near Mysore (a most picturesque mixed heronry in a few islands in the fast-flowing Kaveri), and more recently, Karikili near Vedanthangal and Nelappattu in the Nellore district.

Curiously enough, the diametrically opposed motive, that certain jheels and waterspreads specially favoured by water-birds (both indigenous and migratory) attracted wildfowlers from far and near, has also served to establish major water-bird sanctuaries in recent years. Examples are the Keoladeo Ghana of Bharatpur, the largest, most populous and most celebrated of all our water-bird sanctuaries, and Sultanpur jheel in Haryana.

Before going on to their main breeding birds, it should be said that these mixed heronries also attract indigenous water-birds in a non-breeding condition and also migrants. Where there is what I term a home-water, an adequate spread of shallow water around the nesting trees, many birds like blackwinged stilts, coots and moorhens may be seen that do not nest in the colony but feed in the shallows: teal, pintail, shovellers and other migratory ducks, as also indigenous ducks like spotbills, whistling teals and comb ducks, may also be drawn to the home-water, as also a great many waders. Sultanpur jheel is an excellent example of a waterspread where no birds nest gregariously, but which attracts, besides many migrants (both greylag and bar-headed geese, a variety of ducks, the rosy pelican and flamingoes) indigenous water-birds that are through with breeding, such as grey pelicans, painted

storks and a multitude of spoonbills — a few pairs of sarus cranes breed around the jheel and a large flock of demoiselle cranes sojourn here.

The Keoladeo Ghana of Bharatpur is not only the largest and most important water-bird sanctuary in India and probably in Asia, but also the most spectacular in the numbers and variety of resident and migratory birds it attracts.

Early in the season, from about mid-September to late November, indigenous water-birds dominate the sanctuary. Many pairs of sarus (our only indigenous crane, but it is the tallest of the tribe, and noted for the deep mutual attachment of each pair — it is the *crouncha-pakshi* of the *Puranas*) indulge in their fantastic courtship dance and nest on the periphery of the lake, and practically all the birds of mixed heronries nest in the babool and *Mitragyna parvifolia* trees dotting the waterspread — early on, painted storks in resplendent breeding livery lend colour and opulence to the spectacle of the breeding colonies, and cormorants, darters, egrets and grey herons, openbills, spoonbills and white ibises nest thickly together in the trees, and waders and ducks start coming in.

Later, by December, the migratory birds are the chief attraction, though the indigenous species are still there, through with breeding. Greylag geese, large flocks of a variety of ducks, the rosy and Dalmatian pelican, the arrestingly white Siberian crane (which comes only to this water in our country) and innumerable coots and waders are now the feature of the

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13. *The White-necked Stork. An indigenous stork that prefers to nest by itself and not along with other birds.*

15. *Spoonbills on a rock. Spoonbills like to rest in company at midday.*

waterspread. The steppe eagle and other eagles that prey on the young water-birds follow in the wake of these migrants.

Now for the birds of these mixed heronries. The grey (or spottedbilled) pelican is indigenous, and may breed gregariously by itself atop tall trees as near Kaziranga village in Assam, and at Aredu (where it nests in palmyras! — for some undetermined reason in recent years the birds have seldom nested at Aredu, the largest pelicanry in India), or along with painted storks as in some sanctuaries in the far south, or even in a mixed heronry as at Nelappattu. It can be distinguished from the migratory rosy (or white) pelican by the row of spots in its bill and flecks of grey in its plumage.

We have three cormorants, usually nestling in mixed colonies, occasionally in small associations by themselves. The Large Cormorant, almost goose-sized, is much the largest. When breeding it develops filamentous plumes on its head, and a white patch above the thigh on each flank — in the south, this patch is usually not developed. Next in size is the Indian Shag, a slimmer bird whose plumage shows an overlapping pattern in the highlights, and the smallest is the Little Cormorant. The last two are highly gregarious when feeding and resting, but nest along with other birds as a rule — the Large Cormorant may occasionally dominate a nesting tree.

The darter (or ' snake-bird ') is a cousin of the cormorants, having the big body and broad, webbed feet of its relatives, but has a long, kinked neck, a dagger bill and a long tail. It is not gregarious, and unlike the cormorants given to soaring at times. It hunts fishes under water and is an expert swimmer and diver.

Our three all-white true egrets, flighting and feeding in parties, usually nest along with other birds in mixed heronries, occasionally in a small colony mainly by themselves. These are the Large and the Median (or Smaller) Egret, hard to tell apart at a distance: the longer bill (yellowish in the south, black in the north when breeding) and kinked neck of the Large Egret, and the shorter, thinner bill and kink-free, fluent neck of the Median are useful in distinguishing them. When breeding, they both develop a veil of exquisitely cut up gauzy plumes over the tail — the Median also has an apron of such feathers on its lower breast. The Little Egret does not have these aigrette plumes, but instead develops a pair of thin, ribbon-like streamers from the back of its head when breeding. At all times it can be told apart from the rest by its legs, which are black (like theirs) but with a conspicuous patch of yellow above the toes, on the feet.

The dumpy, off-white cattle egret, a light golden cinnamon on top when breeding, nests in scattered pairs in such colonies, and so does the pond heron (' paddy-bird ') late in the season, almost unrecognizable in a breeding livery which gives it a maroon back and fine, white streamers at the back of its head. The grey heron, with such a wide distribution in races all over the world, is not too common, but in places is so numerous as to be the feature of the breeding colony — at Dachigam in Kashmir and Vedanthangal and

14. *Typical migratory duck: Pintail and Teal flying over a brake of sedges: Tada Lake, Andhra Pradesh.*

16. *Median Egret and fledglings at the nest. The finely dissected nuptial plumes at the breast and above the tail were formerly much in demand for ornamenting ladies' hats and head-dresses.*

Karikili in Tamil Nadu, for instance. The purple heron is also found in a few colonies, but is rarer.

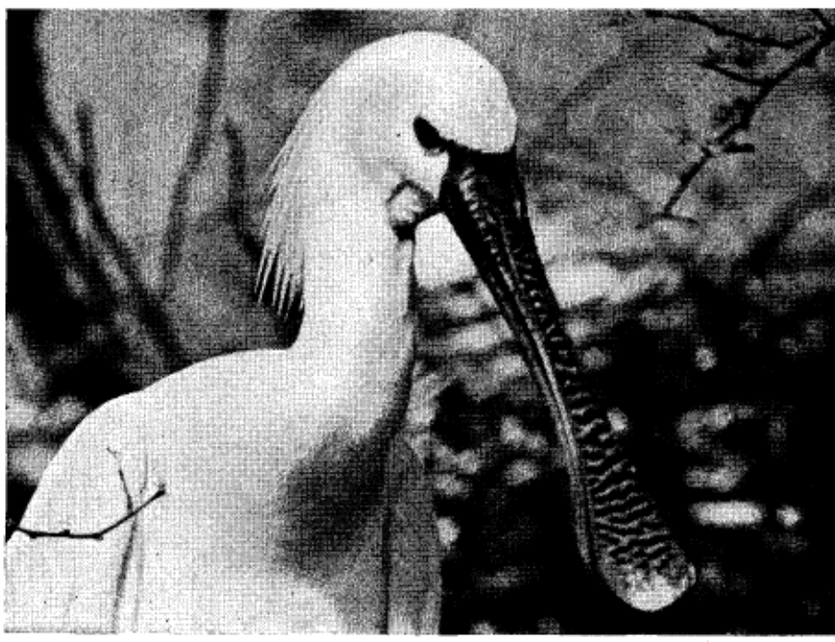
Painted storks and openbilled storks (the openbill is the smallest of our storks and the most ubiquitous) are found at most mixed heronries. Other indigenous storks not found in such places but nesting by themselves (though at times they nest as outliers at a mixed heronry) are the neat, black-and-white whitenecked stork and the tall, lanky blacknecked stork whose neck is iridescent with metallic blues and greens and purples, and the lesser adjutant. Migratory storks long known in our country are the white stork and the black stork, found at large, open sheets of water.

One of the commonest birds of mixed breeding colonies is the white ibis — there are also a black ibis and a glossy ibis, but these are not birds of such colonies. White ibises build their flat nests confluently in places and often take over a nesting tree all to themselves. The spoonbill is more cosmopolitan in its nesting, and nests along with other birds, though it is highly gregarious when feeding and resting, or soaring on high like a stork.

Spoonbills, I think, are among the most interesting of our water-birds: they are much more adept with their awkward-looking bills than one might think, and besides the small fry of shallow waters, feed on a variety of water-plants. When very young, the spoonbill does not have a spoon bill, but a hook-tipped, swollen beak like a pigeon squab, but very soon develops its characteristic, spatulate bill. When not breeding, spoonbills shed the thick tuft of plumes at the back of their heads, their nuchal crests.

These are the common birds of mixed heronries in India. Visiting a sanctuary featuring them, you may find many birds not mentioned here in the home-water, and, more exciting, scouring the remote countryside, discover a nesting colony unreported so far.

17. *Close-up of the corrugated, spatulate bill and crest of a breeding spoonbill.*



18. *A party of Indian Shag swimming. Like all cormorants, the shag rides very low in the water, with only the head and neck above the surface.*