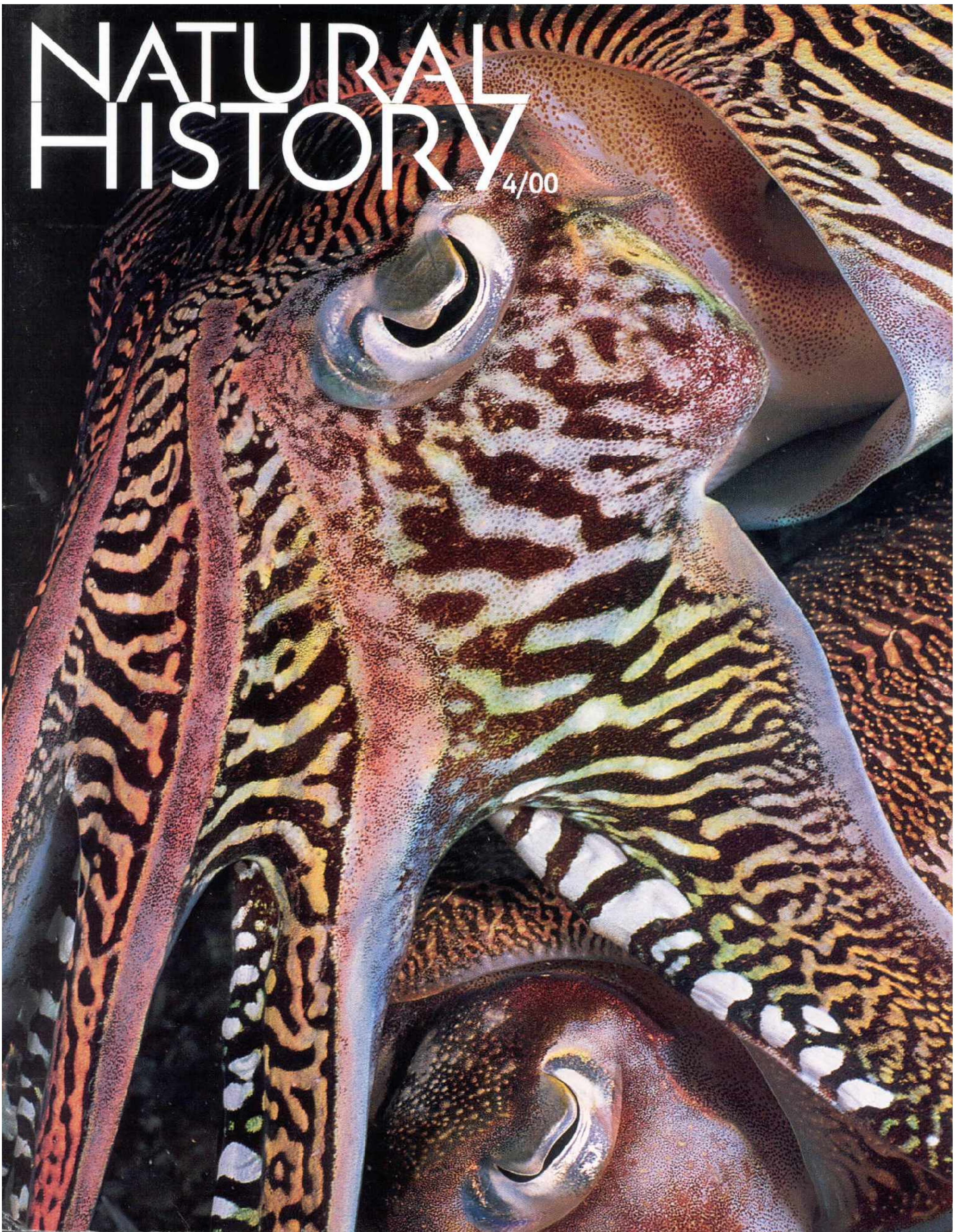
NATURAL HISTORY
4/00

# Spring Break

A coastal wetland nourishes birds, and the endangered

THIS LAND: MEXICO

mangroves,
American crocodile.

By Robert H. Mohlenbrock

JACK DYKINGA

A member of the custard-apple family, *anonillo* grows in a mangrove swamp. The branches are draped with bromeliads, while *Crinum* lilies nestle in the roots.

On the west coast of Mexico near the town of San Blas is a limestone spring called La Tobara (or La Tovara), part of an inviting system of lagoons, canals, and navigable tidelands. These wetlands are about a ninety-minute drive from Tepic, the state capital of Nayarit, but I traveled there from the coastal town of Puerto Vallarta, Jalisco, where I was staying. Heading north on Mexico's Highway 200, I soon crossed from the Central into the Mountain time zone. The route followed the coastal plain—past crops of avocado, mango, papaya, teak, and pineapple—and then meandered up and down the low foothills of the Sierra Madre. As I continued along the coast on Route 161, a mangrove swamp lay to my left, on the ocean side of the road, while to the right were agricultural crops, including peanuts and jackfruit.

Just north of the village of Santa Cruz, I stopped to investigate a small stream flowing toward the ocean. What caught my eye was a tree that looked very much like the black willow that grows in the temperate eastern half of the United States. It turned out to be a yew-leaf willow, which ranges from western Texas and southern Arizona all the way south to Guatemala. Near the stream I noted buttonbush, golden glow, and bushy broom sedge—all familiar plants that I hadn't expected to find in Mexico.

Eventually, just three miles south of San Blas, I reached La Aguada boat docks, the starting point for my trip through the wetlands (a second boat landing, El Conchal, is at the edge of town). Boarding a motorized canoe called a *panga,* which carried seven other passengers and our guide, I set out on one of the most captivating nature excursions I have ever taken.

After leaving the dock, we glided slowly and quietly along a narrow canal that had been cut through an otherwise impenetrable jungle of red, white, and black mangroves, with overhanging branches and intricate tangles of curved prop roots. About ninety species of mangrove exist worldwide. They grow primarily in tropical climates between 25° north latitude and 25° south latitude, in salty or brackish water—near the ocean, in marshes, and at the mouths of rivers. The root cell membranes of the red mangrove are specialized to reduce the intake of salt from the water, and the thick, leathery leaves of the black and white mangroves are adapted to excrete salt compounds. Red mangrove roots provide protection for young fish, invertebrates, reptiles, mammals, and birds, while the underlying peat formed from root matter traps soil and silt and filters runoff and pollution.

As we made our way along the canal, we saw several American crocodiles sheltering within the mangrove roots, as well as a modest-sized green iguana lying on a low-hanging branch. Although they feed primarily on fruits and leaves, iguanas in this part of Mexico may grow nearly six feet long; their heavy tails can deliver a good wallop, and their strong jaws can inflict a deep bite.

Our guide was especially knowledgeable about the bird life and was able to show us three boat-billed herons—magnificent tropical birds with broad bills. This kind of heron uses its sensitive bill to detect edible food in the water (mainly fish and shrimp), which it can then quickly engulf. We were treated as well to the sight of a common potoo, whose coloration blended perfectly with the lichen-striated mangrove branch on which it sat. A distant relative of the whippoorwill, the potoo feeds mainly at night, opening its short, curved bill very wide to sweep up flying insects. We also saw a citreoline trogon, a

gorgeous bird with a predominantly yellow underside.

Passing out of the mangrove swamp, we entered a deep marsh. Large wading and diving birds seemed to be everywhere: great white egrets, great blue herons, green herons, tricolored herons, roseate spoonbills, anhingas, cormorants, and jacanas. Just as we were leaving the deep marsh, we startled a bare-throated tiger heron, which flew away from our *panga,* while a chachalaca (a pheasant-sized bird whose name reflects its call) went scurrying off among the trees. We followed the canal into another wooded area, this one with swamp forest trees instead of mangroves. Our

journey ended at a beautiful lagoon fed by La Tobara spring. Here visitors may leave their *pangas* for a guided tour around a crocodile breeding farm that was created to help preserve these endangered creatures.

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For visitor information in the United States, call (800) 44-MEXICO
Or write:
Tourist Office
City Hall
Main Plaza
San Blas, Nayarit
C.P. 639426
Mexico

## HABITATS

**Mangrove swamp** has abundant red mangrove and lesser numbers of black mangrove and white mangrove. Other common trees are mahoe, whose large yellow flowers turn red as they mature, and the palm *Sabal mexicana.* Bromeliads, including at least three kinds of *Tillandsia,* bedeck many trees. In the understory is the giant leather fern, the same species that grows in brackish waters in peninsular Florida, and a huge *Crinum* lily with strap-shaped leaves up to six feet long and clusters of foot-long white flowers.

**Deep marsh** is dominated by false cane, a grass that grows as tall as twelve feet and has large terminal clusters of spikelets, and flag plant, which reaches ten feet and has large, cannalike leaves and rather small lavender flowers borne on slender, zigzagging stems. Narrow-leaf cattail, with stout stems up to ten feet tall, is also common. Somewhat shorter plants include Johnson grass, the same species that is a troublesome weed in the United States; a five-foot-tall deciduous fern *(Thelypteris interrupta)* related to the lady fern of the eastern United States; and a broad-leaved arrowhead that appears to be the same species common in southern U.S. wetlands. Smaller herbs are marsh pennywort and camphor weed (both also common in U.S. wetlands). Other plants are false nettle, a pink Saint-John's-wort, and two species of white-flowered smartweeds. Morning glory vines and climbing hempweed scramble over much of the vegetation.

American crocodile

**Wooded swamp** trees usually have either thick, leathery, toothless leaves or leaves divided into numerous leaflets. In the first group is *Persea podadenia* (similar to and related to the red bay of the southeastern United States) and a tropical species called *Pisonia aculeata.* In the second group are a species of mimosa and a cat's-claw, members of the legume family. Here also are the palm *Acrocomia mexicana* and several large species of wild fig. Wild orchids and bromeliads find homes in the crotches of many trees. Visitors should beware of poison ivy, the same species found in the United States.

**Spring-fed lagoon** plants include watercress, a species that inhabits spring-fed swamps in many parts of the world. Overhanging the lagoon are several handsome specimens of *Cecropia peltata,* a tree whose large lobed leaves have a whitish underside.