

INTERESTING FACTS ABOUT PELICANS.

BY CHARLES F. HOLDER.

Among the birds the pelicans are possibly the least attractive from an esthetic point of view, and this is not hearsay, as I have been the fortunate—or unfortunate—owner of divers pelicans ranging from the sea and yellow leaf to the extraordinary creature just from the egg; have had them as pets and as serfs, and I have no desire to continue the acquaintance, for the brown pelican is a disagreeable, wheezing, asthmatic bird which would take as much pleasure in plunging its hooked beak into the eye of friend as foe—a bird with an insatiate appetite and of atrocious habit. Notwithstanding this the pelican has some interesting ways and features.

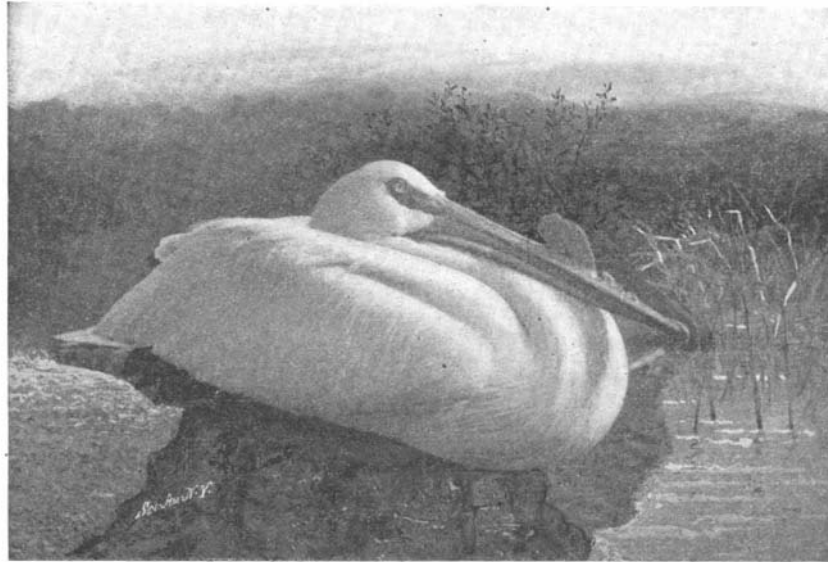
The pelicans at Garden Key, Fla., or its vicinity, nested on a key just above water, upon which were a few mangrove trees, the nest being the rudest possible structure, formed of twigs and wood dropped among the branches, the result being a mound rather than a nest upon which the eggs—one or two—were laid. The young, when they appeared, were at once confronted by an army of land crabs that contested every meal with them. In some inscrutable manner the young birds survived, and at the age of six weeks were most extraordinary objects. Two such individuals I secured, the object being to see how amenable the pelican was to the taming process, and of the many experiments with them one is distinctly impressed upon my memory. I cannot recall that the pelican ever refused food; after the most impossible feeding it had the same dejected, half-starved attitude and the same asthmatic cry for more. It was only after many months that I made the startling discovery that the pelican can never be satisfied.

An old fisherman employed two of these birds to round out the comforts of his life. He placed straps about their necks, then sent them out fishing, when they would fill their enormous pouches with fish and, unable to swallow, would come swimming in; in this way the old man obtained a certain amount of his bait. This is the only use to which I saw the pelican put, at least alive; the skin is the fashionable costume of the Seri Indians of Tiburon Island, and the curious bill is employed in various ways, the wing-bones as pipe stems; but alive the pelican has a very limited economic value.

My birds became perfectly tame and followed me about the reef, often above the boat; when weary sometimes alighting on it, and when ashore roosting on a scantling near the boathouse of an old fisherman. When approached they emitted a remarkable and depressing series of cries, so perfect in their imitation of a human being in the violent stages of asthma as to produce a painful effect on ordinary nerves. The pelicans were extremely stupid, for while they would, as suggested, use their bills on their owner when feeding them, they did not have sense to repel the most flagrant robbers of the reef. In feeding they generally flew twenty to thirty feet above the water with rapid motion of the powerful wings, holding the head slightly upon one side that they might observe the schools of sardines. When the latter were sighted they would plunge blindly downward, opening the mouth widely just before they reached the water, endeavoring in this clumsy manner to catch the fish which, not being able to see upward, were entirely ignorant of the nearness of danger. This was usually successful, and here I noticed a difference between the Florida and California brown pelican. The former in this plunge would not go out of sight, while the latter, diving from a greater height, often entirely disappears. Rising after the plunge the pelican invariably wags its diminutive tail—a self-congratulatory act, which confirms the bird's stupidity, for the chances are one to five that it has caught nothing. The bills are held upward, the water allowed to run out of the enormous pouch, and then, if any game has been caught, the pelican tosses its beak upward, which throws the fish forward or toward the point of the beak where it is often held for a few seconds, from here being dropped, as it were, into the throat, which is a very small orifice in a veritable waste of pouch. At this moment, perhaps, a laughing gull robs the pelican. Sometimes it alights on its back, again on its head, and the stupid bird makes no resistance, the gull often uttering its victorious "ha-ha!" in advance. Just as the fish is thrown to the tip of the beak and protrudes from the side, the laughing gull leans forward, snatches it and rises aloft to, in turn, be followed by the swift man-of-war bird. In

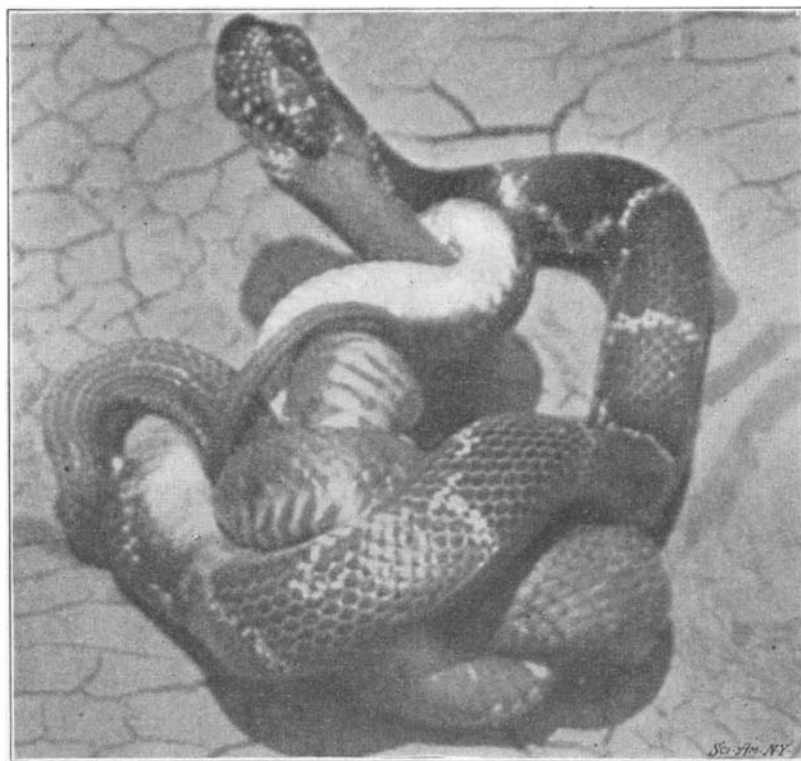
this simple way a pelican will be robbed by successive birds, and will swallow but a small percentage of what it catches, which possibly explains why it is always hungry.

In the accompanying illustration is seen a white pelican, *Pelicanus erythrorhynchos*, the most interesting member of the group. It appears to be a mounted specimen, but the photograph is from life, and is introduced to illustrate a remarkable feature. On the upper bill will be seen a crest, "dorsal fin," "centerboard," or other local names being given it. It varies



THE WHITE PELICAN, WITH THE CRESTED BILL.

in shape in different individuals, and in the same birds. The crest is shed at times—an interesting fact discovered by Mr. Robert Ridgway, the distinguished ornithologist, who made the discovery at Pyramid Lake, Nevada, some years ago. The peculiar crest is a very conspicuous object, and at one time it was supposed to be an ornament, and described as such, peculiar to the male. Mr. Ridgway found the birds nesting in May at this lake, the nests being masses of sand and gravel six or eight inches in height and twenty inches across, upon which was deposited one egg, the male standing or sitting by the female while the latter was on the nest. In July Mr. Ridgway observed that the birds had no "centerboard," or crest, but in May, when the birds were nesting, a large proportion of both males and females were provided with the crest. He learned that, from this time on, the birds cast or shed their crests, the curious objects being found about the nests; by the last of May all the birds were without this singular feature, the ground in certain localities being strewn with them. It would appear, then,



KING SNAKE KILLING A WATER MOCCASIN.

Photographed from Life.

that the crest comes with the breeding season and disappears about the time the young appear or the hatching process begins.

The white pelican is often seen in winter in Florida, and I have observed flocks on the Pacific coast going north. So far as my own observation goes, the brown pelican of Florida nests in trees; the brown pelican of California on the ground. The latter dive from above to capture their food, the Florida species not making so high a dive. The white pelican never dives, but swims along the surface, capturing its prey in an ab-

surdly simple manner, almost inconceivable when the shyness of mullet and sardines is recalled. Dr. D. G. Elliot describes it as feeding by swimming along, "beating the surface of the water with its wings and scooping up great numbers of fish at once."

A BATTLE BETWEEN TWO DEADLY SNAKES.

BY W. T. BRYAN.

Some two years ago it was my good fortune to witness a combat between a king snake and a water moccasin, and to secure the photograph from which the accompanying engraving is reproduced.

I was attracted to the scene by a negro laborer. When I reached the spot, I found the snakes coiled together in a pool of water, the king snake gripping his enemy with the tip of his tail, just back of the head. It was clearly his intention to drown the moccasin. For the purpose of taking my picture, I lifted the two struggling, writhing serpents to a rock. Just before I took my photograph, the king snake pulled the moccasin's head in the exact position he wished, and quickly stretched his jaws over it. It was then that the photograph was taken. Thoughtlessly enough, I put the snakes back into the water, thinking that the king snake would also drown. Very soon, however, he left the pool, stretched his victim straight out before him and leisurely began to swallow him. In my efforts to take another photograph, he was frightened away. Both snakes were nearly the same size, being about three and one-half feet in length.

To Lessen Damage by Forest Fires.

Last year within two weeks over \$12,000,000 worth of timber and other property was destroyed by forest fires in Oregon and Washington. This enormous loss occurred upon a restricted area and represents only a very small part of the annual loss from this source. Every timbered region of the United States suffers year after year from fire. The annual loss is estimated at from \$25,000,000 to \$50,000,000. Forest fires have been regarded as almost inevitable, and few systematic attempts have been made to prevent or control them except in the States of New York, Pennsylvania, and Minnesota, which have efficient systems of fire protection.

The Bureau of Forestry has this year undertaken a thorough study of the forest-fire problem in several different regions. It has placed men in forest districts to study fires while in the process of burning. Instead of waiting until the fires are over and relying for information on local reports, as has been done heretofore, the fires are now being observed by the Bureau's agents and full data will be obtained as to how they were caused, how fast they burn, what conditions favor or hinder them, and just what damage they do to the soil and to tree growth. Each agent of the Bureau has been assigned to a district and is investigating all fires that occur within his territory. For example, one man studies a lumber tract, another a farming district, a third a turpentine orchard, etc.

In connection with this detailed study, the agents will observe the methods of fire protection practised by railroads and other owners of timber lands. The fire warden systems of the States which have forest-fire laws, and the patrol system in use on the federal forest reserves will also be observed closely.

By such methods the Bureau of Forestry hopes to replace with carefully gathered facts the vague general notions that now exist about forest fires. When the problem is solved for any particular region, the Bureau will be ready to recommend methods of fire prevention and control for the private land owner, and to suggest forest-fire legislation for the various States.

The investigation is now in progress in northern Florida and southern Alabama and Georgia under the direction of Ernest A. Sterling. H. J. Tompkins, with a small corps of assistants, has begun the work in Minnesota, Wisconsin, and Michigan. Later in the season a study of forest fires will be made on the Pacific coast.

Aluminium becomes granular and brittle when heated to about 600 deg. Centigrade; at a slightly increased temperature it becomes so soft that it can be easily cut with a knife. Hence all that is needed in order to pulverize it is to heat it to the above-mentioned temperature and pound it in a mortar. With zinc a similar treatment will give the same result.