

The Islands the Alligators Build

By Frank M. Chapman, reprinted from *Our Animal Friends* 21(9) (May, 1894), and featured in *Aquaphyte* 24(1):4-6 (Summer, 2004).

Few animals are more friendless than the alligator. With claims to neither beauty nor intelligence, he is not handsome enough to win our admiration, nor dangerous enough to make us respect him. For hours he basks in the sun, floating on the surface of the water, or lying on some muddy bank, apparently as useless as the log of wood he so much resembles. Every man's hand is raised against him. He is killed by a tourist in pure wantonness, simply because he affords a mark for the ever-ready rifle. Hunters slay alligators by thousands for their hides and teeth. Indeed, it is for these alone that the alligator is prized. I think, however, that, like everything else in nature, the alligator plays a part in the drama of animal life for which he is especially adapted.

It is said that on the lower Mississippi River alligators feed on muskrats, which seriously weaken the levees by burrowing in them. If this be true, the alligator is here of direct value to the planter, and should therefore be protected by law.

However, my plea for the alligator is not based on his powers as a destroyer of muskrats, but on his services as a land-maker. It does not seem probable that so stupid and sluggish an animal should be a factor in changing a stagnant pool of water—a breeding ground for miasmatic germs—into a fertile pasture where cattle may graze. Nevertheless, I think it can be proven that he aids in accomplishing this remarkable transformation.

Several years ago I passed the winter studying birds and mammals near Gainesville, Florida. Among my especial desiderata were a singular little round-tailed muskrat, known as neofiber (which had been previously been found only on the Indian River), and a peculiar semi-aquatic hare. A resident of the region suggested that these animals might be found on the floating islands of "Bevan's Arm." This "Arm," a branch of Alachua Lake, is what is known in Florida as a "bonnet lake." The name will be familiar to anyone who has visited Florida, for "bonnet lakes" are abundant throughout the State. Imagine a lake so thickly covered with a growth of pond-lilies that the water shows only in occasional patches. The lilies are both of the yellow and of the white varieties, but the former are by far the larger and more numerous. Some leaves measure eighteen inches in diameter, and the stems of many project nearly two feet above the surface of the lake. The water is sometimes fifteen or twenty feet in depth, and in the clearer spaces much deeper. It

is filled with many species of aquatic plants, in which one's oars become entangled, and these, added to the abundance of lily leaves or "bonnets," make rowing a difficult and tiresome matter.

In one of the open spaces near the centre of the "Arm," which was here about half a mile in width, were the islands. There were several of them, irregularly circular in shape and varying in diameter from about ten to nearly fifty feet. They were densely grown with reeds and grasses of many species, and, in some places, tall flag-like sedges and button baskets grew.

To a naturalist, floating islands possess a strong fascination. They are like earthly satellites floating about in watery orbits. The animals which inhabit them seem to belong to a sphere of their own. The isolation of their island-home affords them the protection from their mainland enemies, and this is doubtless why animals are so abundant on the islands in the "Arm." Certain it is, I have never seen a bit of ground of similar extent so densely populated.

Rowing slowly out through the "bonnets," one was greeted by a chorus of frog-like grunting which seemed to issue from under every lily leaf. It was made by young alligators. The "Arm" was a nursery for them. They were of all sizes, from little fellows six or eight inches in length, born the preceding summer, to fully grown adults measuring ten feet or more. The smaller ones are found in schools, families, perhaps; occasionally to sun themselves, they crawl upon lily leaves floating on the surface of the water, making an ideal picture of lazy contentment as one can well imagine. The larger leaves will support the weight of an alligator three feet in length.

One of the larger islands was my daily resort for nearly two weeks, and I will confine my account to the history of this particular island, speaking first of the life upon it, then of its probable origin.

I always approached it with caution, in order that I might have a glimpse of its largest inhabitant. This was an alligator about eight feet in length. His habit of crawling from the water on to the island at a certain place had resulted in his wearing away the shore, until he had formed a miniature harbor. He "buildded better than he knew," and here on the muddy shore he dozed the hours away, enjoying, although he did not know it, the fruits of his own or his fellows' labors. On my appearance he would half slide, half roll, off into the water; the waves rippled outward in ever-widening circles; a few bubbles rose to the surface, and I saw no more of the king of the islands that day.

My landing was a few feet beyond. It was made, and my boat "beached" in a unique manner. The island was two to three feet in thickness, and floated in water from fifteen to twenty feet in depth. As I stepped from my canoe on to its edge it sank slowly beneath my weight, and, stepping backwards, I could thus draw the floating canoe after me; but as I advanced toward the centre of the island the shore rose, and the canoe was lifted from the water by this kind of natural drydock.

Progress now was very much like walking on cracked or partially melted ice. Where the grass grew thickly there was a firm footing, but the spaces between the little hillocks were treacherously soft. To fall through an island would no doubt be a novel experience, but one that the experimenter would doubtless never attempt again.

Although none of the residents were visible, it required but a glance to show that this island was thickly populated. Broad avenues entered and left the water. There as a network of roads, pathways and trails leading to grassy nests well hidden at the base of a hillock, or to underground tunnels with entrances half-closed with mud. Close inspection showed the tracks of many feet. As I walked carefully about this city—for it was nothing less—I felt like a Brobdingnag in Lilliputia. While the place was apparently deserted, I knew that the inhabitants were all at home. With them it was night, and my presence was doubtless causing many a heart near me to beat with unaccustomed rapidity.

On this little fragment of earth there proved to be representatives of almost every class of the animal kingdom. The broad avenues leading to the water were made by the marsh hare. This hare resembles our common "cotton-tail," but its tail is of drab, and not of white, cotton, while its feet are less heavily furred and are partly webbed. Its presence on these islands shows how aquatic are its habits. It swims readily, and is thus especially fitted to live in the low-lands of the South, where floods are more or less frequent. Indeed, the habitat of this hare and its cogener, the water hare, is entirely included within that part of the lower Mississippi Valley and adjacent regions which is subject to inundations.

The smaller paths led to nests of dry grasses in the hillocks. These were the homes of marsh-rats, a native species, smaller than our imported house-rats, and with a denser, heavier fur, which sheds water easily, and thus forms an excellent suit for these swamp-loving animals. The underground passages proved to have been made by the rare neofiber, and there were also

some of its singular dome-shaped houses, built of woven grasses, with a single chamber, having both exit and entrance.

Here, then, were three species of mammals living in harmony on a bit of ground only a few yards square.

Many species of birds occasionally used the island as a nesting place. There were white herons and blue, bitterns, ducks and others; but I will tell only of those which seemed to make the island their home. Of these probably the most common were the boat-tail grackles, a name they have acquired from their habit when on the wing of holding their long-tail feathers on edge, as it were, the tail thus resembling in form the hull of a boat. The males are beautiful birds, with glossy blue-black plumage, while the females are of an inconspicuous dull brown. They place their large nests of grasses in the tall flags, laying eggs curiously ornamented with hieroglyphic-like markings.

There were also great numbers of red-winged blackbirds, the males having scarlet epaulets, and the females, as usual, being dull, obscure-looking birds, but I do not think they nested on this particular island.

Green herons build their platform-like nests of sticks in the button-bushes near by. Their young were ungainly accumulations of wings, legs, and a long neck, all radiating from one small centre, and a scanty covering of white hair-like feathers did not add to their gracefulness. A strange, startling voice I heard sometimes in the reeds probably belonged to a king rail, who showed himself on only one or two occasions. It was a most singular cry, a loud *Bap, Bap, Bap*, many times repeated, as though some one was rapidly striking a resounding board.

Florida gallinules were always common, and in May a number of their purple cousins arrived from the South. It was a pleasure to watch these graceful birds stepping daintily over the lily leaves while feeding. Their many strange notes all bore a suggestion of the barnyard about them, a character quite out of keeping with their surroundings. I found only one nest, constructed of reeds and placed like a staging over the water. The plumage of the purple gallinule is of a deep indigo below and of a bright greenish-blue above, and it wears a scarlet helmet. Its under tail-feathers are white, and when the bird is on the wing, holding its tail at right angles to the plane of its body, this white mark becomes a conspicuous object.

One morning I found a "pellet" which had been disgorged on the island by some owl. It contained the skull of a cotton-rat, which had probably fallen victim to a barred owl.

Of reptiles, in addition to the alligators, there were snakes and turtles. One morning I saw a hideous moccasin snake lying coiled in the grasses almost at my feet—a loathsome creature, nearly four feet in length, possessed of a power which rendered his very hideousness strangely attractive. Poisonous snakes have the sort of fascination for us that belongs to scaffolds and guillotines and other means of sudden and violent death. I killed this snake and took him home as a specimen, assuring myself, however, that he was thoroughly dead before placing him in the canoe, where he would not have proved an especially desirable companion had he revived when I was halfway to the shore.

A few days later a small water turtle which had come ashore to lay its eggs was found. It had laid one egg in a small hole at the base of a hillock, and another was laid in the canoe.

Doubtless there are several kinds of insects on the island, but I found only one species. This was an ant. Probably the ants on this little detached world were more numerous than all the other animals combined. They lived in the only dry spot, a little mound near the centre of the island. They lived in the only dry spot, a little mound near the centre of the island. Their home was inconspicuous, and might have escaped notice entirely had I not sat down on it!

To return now to the history of these islands and the part alligators play in building them. These gigantic lizards love to lie in the soft mud at the bottom of lakes; and they carefully select such places in which to hibernate during the colder months.

Now, if one could see a “bonnet” lake from which the water had disappeared, it would be noticed that its bottom is a network of interlacing lily-pads. The roots are as large as a man’s arm, and it will be readily seen how they would prevent a large alligator from snugly nestling in the oozy mud. The alligator, therefore, prepares his bed by biting and pulling out these roots, and they come floating to the surface, showing plainly the marks of his teeth, to form the framework of a future island. Every stage of its growth could be seen in the “Arm.” Numbers of these roots float together and form a kind of raft. A scum collects about it, dust settles upon it, and the whole soon looks like a sheet of mud which undulates with the waves. As it becomes firmer, a small plant, always of the same species, makes its appearance, entirely covering the island, and growing so evenly that one might suppose its seed had been carefully sowed by hand. Later stages are now merely questions of time, but it is probably only a few years before the roots torn from the bed of the lake by the alligator are firmly woven into a compact mass by the grasses and

reeds which take possession of it, and we have then an island quite similar to the one I have described.

This, it is true, is not a pasture, but it may become one at any time. Some day a strong wind will blow this island ashore—indeed, I saw islands which had been stranded—and then the roots in its bottom will prove living anchors, holding it to its moorings, and by and by the floating island will become firm ground over which cattle may graze. As island after island is blown against this one, the “Arm” recedes, the shore becomes dryer, and ere long it will be firm enough to support cattle which are attracted by its luxuriant growth of grasses.

And now what becomes of our villagers? Search the shore as you will, comparatively few traces of them are to be found. Robbed of the isolation of an insular life, they soon disappear to seek new homes where they will be more secure from the attacks of their enemies. The alligator gives place to the cow, the grassy nests of the marsh-rats and neofiber are soon overturned by prying pigs.