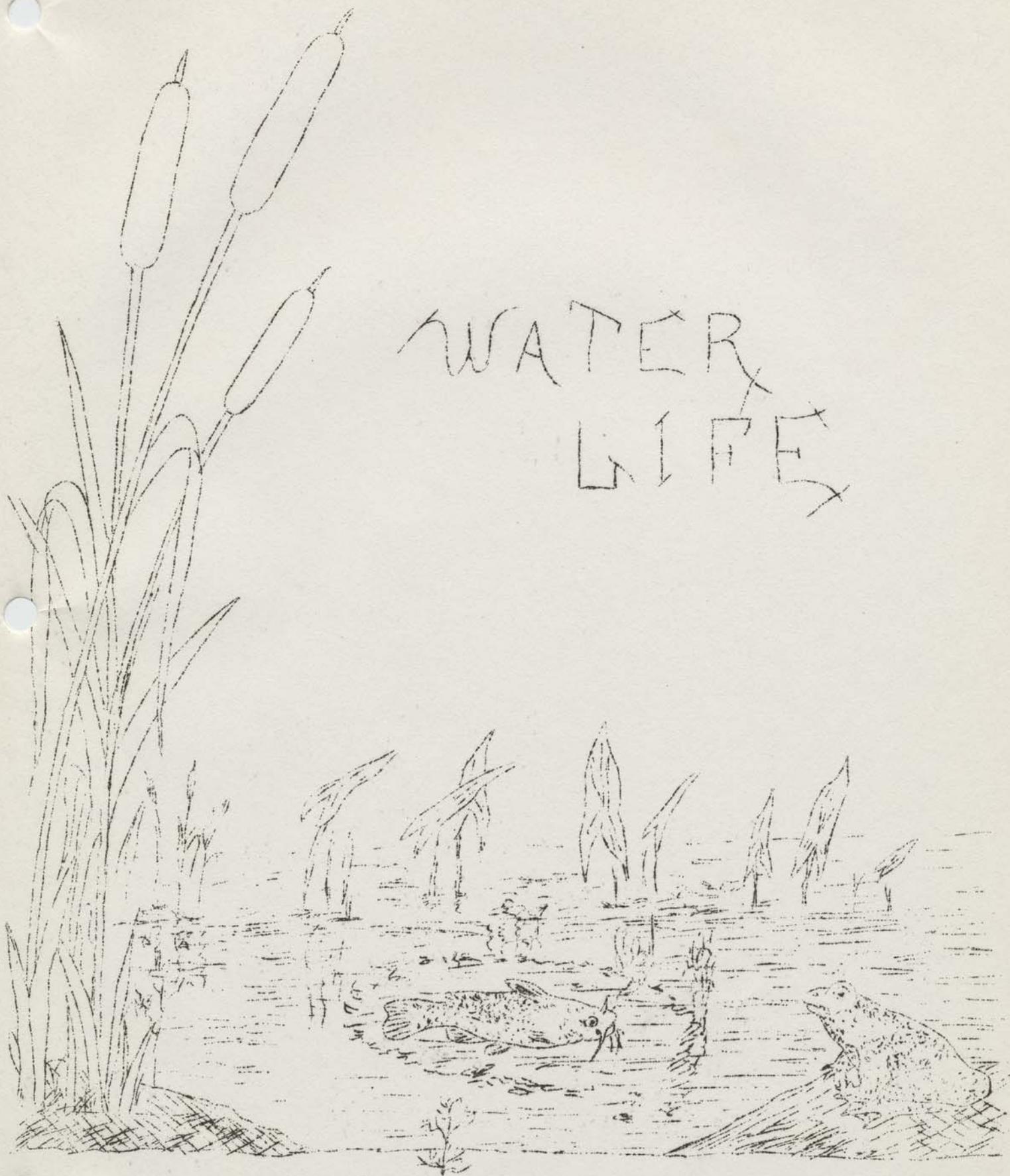


# WATER LIFE



Bullhead guarding his nest  
where dangers lurk.

Many Beautiful Microscopic Forms Found in Green Pond Slime  
(Protophyceae)

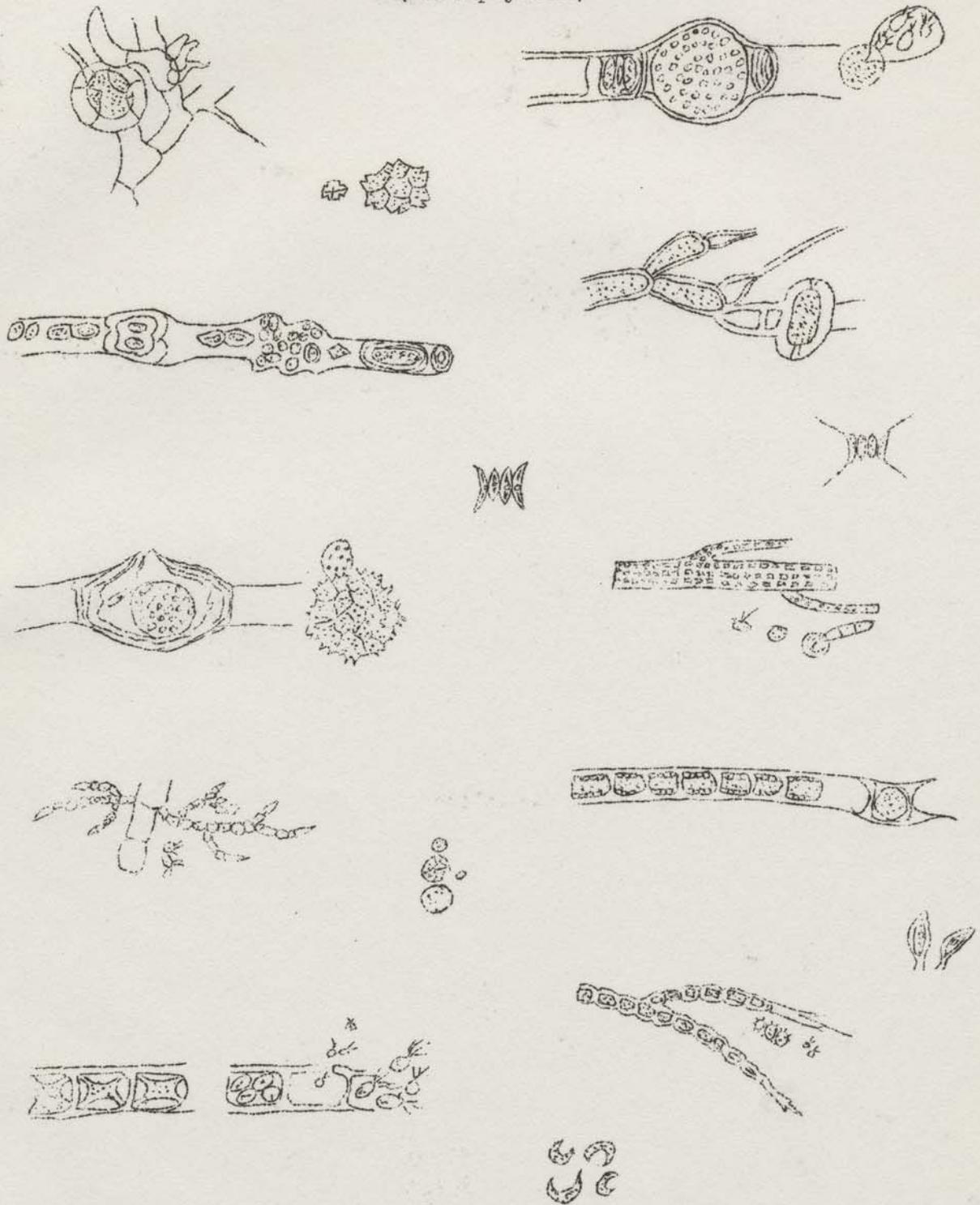


Fig. XXXVIII

INTRODUCTION TO WATER LIFE AND  
LOWER ANIMAL TRAIL

Many of our noted thinkers have found that the water edge offers a congenial place for contemplation and action. Every pond and brook is a treasure for nature observation. It is along the rivers and lakes that lessons of conservation of forest, wild flowers, fish, animals and birds are most needed. One might call fishing a constructive joy because it answers an impulse to go to the outdoors. This joy is open to all alike. There is an equality of all men while fishing. This past-time does not require all the fisherman's time and thought. Many naturalists have discovered rare facts concerning the life in and around water while angling.

WATER LIFE

Water Life and Lower Animal Trail Signs

This trail has much vital interest to persons of all ages. It will include the frog, toad, lizards, turtles, snails, snakes and cray fish as well as the fish and the lower life forms, both animal and vegetable, of the stagnant and clear water.

If it is possible, a compound microscope with simple directions for collecting and mounting some of this microscopic life would add much to the interest of this group. A few prepared slides of such as the scales of a butterfly wing, the compound eye of a fly or the various tiny animals of the water would start the interest. Prepared charts of the great variety of the green algae and primitive animolcules would be worth while. See chart of green pond slime. Fig. XXXVIII.

Tiny minnows might be found climbing falls just as their larger relatives do in the Pacific coast. Surely this would make interesting sign material.

The snake with its discarded skin hung by the fly catcher birds' nest would inspire some labels to arouse more observation and speculation. The question of how many times the snake changes his skin a year, and if the number of rattles on the snake and the number of points on deer antlers indicate their age might make our trailers follow up quite a line of study.

Activity

1. Toad or frog eggs or tadpoles might be kept in an aquarium bed and watched. Since they are very beneficial, it would bewell to let them out when mature.
2. Lizards, snails and turtles might be kept in a vivarium, and even placed on tripods out along the trail for observation.
3. Cray fish should be of great interest both in their chimney mud homes and in captivity. How do they bail out water?
4. The balance of life in a pond would furnish thought for many tramps along the water life trail.

5. The question of difference between bird egg, turtle eggs and snake eggs might be found here. One of each on exhibition would attract many fishermen.

6. Feed a snail a piece of sweet apple and watch his saw teeth and round tongue make a hole. Is it a right or left spiral snail? All who are forced to see a ball game through a knot hole should borrow the periscope eyes of a snail.

7. Watch the earth farmer who plowed, harrowed, fertilized and drained the land long before man appeared.

8. Find the uses for all the appendages of a cray fish. Watch cray fish carry stones. Find their small swimmerets on the under side of the abdomen. They are paddles. The mother uses them in other ways.

9. Capture a harmless snake, place it in cage. Watch its tongue antenna. Which way does its teeth point? Why? See how big a mouthful it can take. Why? Offer him small toads, earth worms and insects.

10. Place a turtle on a board in the aquarium but not with fish. Watch his distrustful and withdrawing ways. If man had lived as neighbor to the monsters of geologic times, he probably would have built a stone house and carried it on his back too.

11. Many insect larvae live in the water. Set a net to catch the larvae of the dragon fly, a damsel fly and also the pack train of the caddis worm. Place the catch in pond water in a jar or basin to watch with lens.\*

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\* Field book of Pond and Stream by Morgan will help to identify both plant and animal life of the water.