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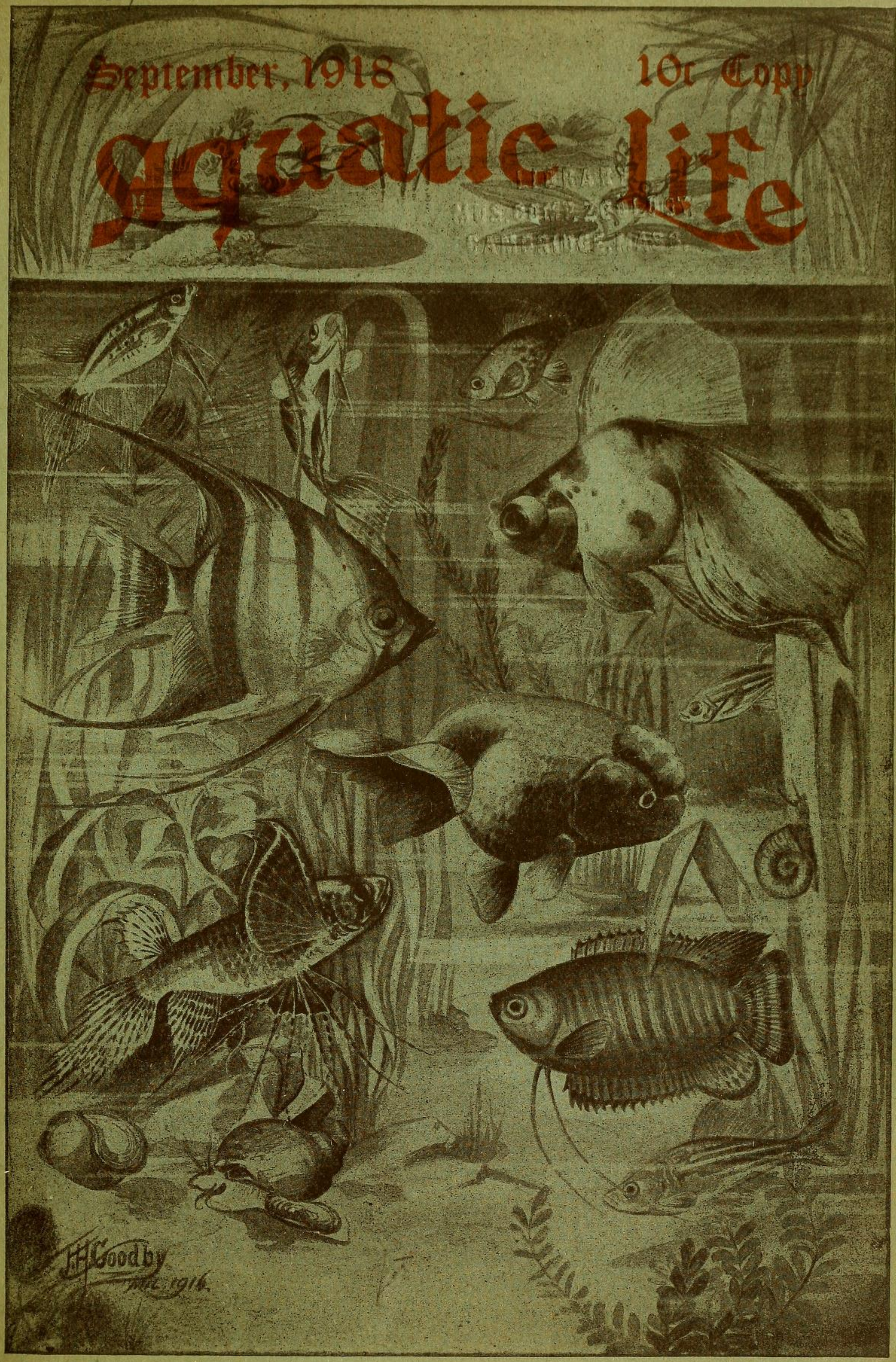
Aquatic Life



Observations on the Chelonians of North America. IV.

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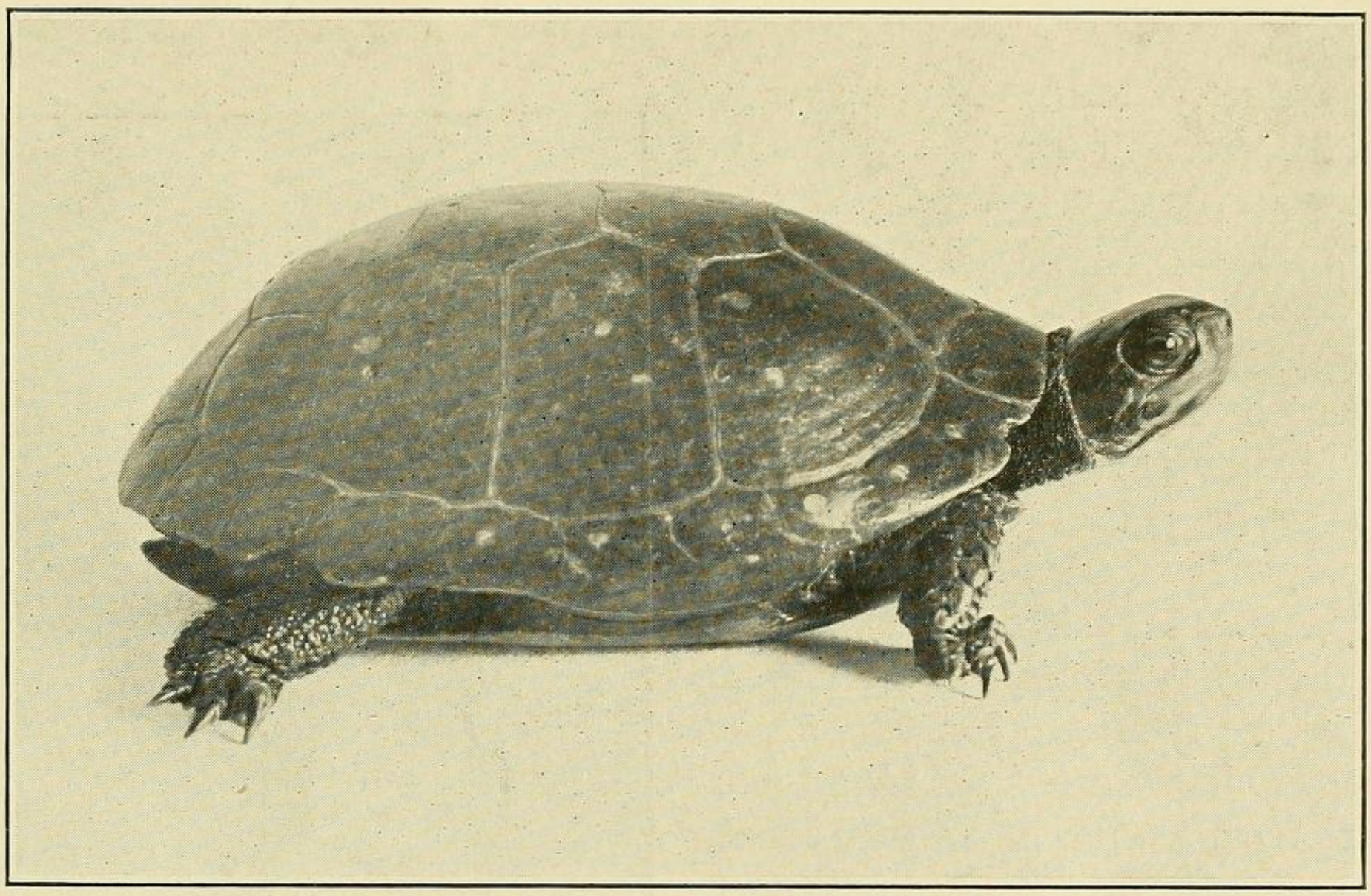


Melanemys guttatus **Spotted Turtle**

Most writers on our turtles and terrapins include in this group—that is, the genus *Chelopus*—four species, namely, the Spotted Turtle *(Chelopus guttatus)*, Muhlenberg's Turtle *(C. muhlenbergii)*, the Western Pond Turtle *(C. marmoratus)*, and the Wood Terrapin *(C. insculptus)*. Living specimens of all these forms have been studied by me, together with their structure and habits, many times during the past half-century. In 1866 I had some forty living specimens of our common Spotted Turtle, ranging all the way from those just out of the egg to ones of very advanced age. Even at the present time I have a very beautiful specimen of this species—a female—which I have recently photographed, and a reproduction of which illustrates the present article. It has been kept in one of the aquariums in my study, and upon the 10th of July, 1919, she laid an egg; a second one on the 24th of the same month, and a third two days afterward. This is now three weeks ago, and none have been laid since. I photographed these three eggs, and they are shown here, natural size. Again, above these eggs, there is a reproduction of an egg of the common Musk Turtle *(Aromochelys odoratus)*, and this I also photographed, natural size, the specimen hav-

ing been presented to me by Mr. Edward S. Schmid, of Washington, who had a number of this species of turtle in a tank at his establishment. These figures show very well the slight difference in the form of the eggs of the two genera. All are pure white and ellipsoidal in form.

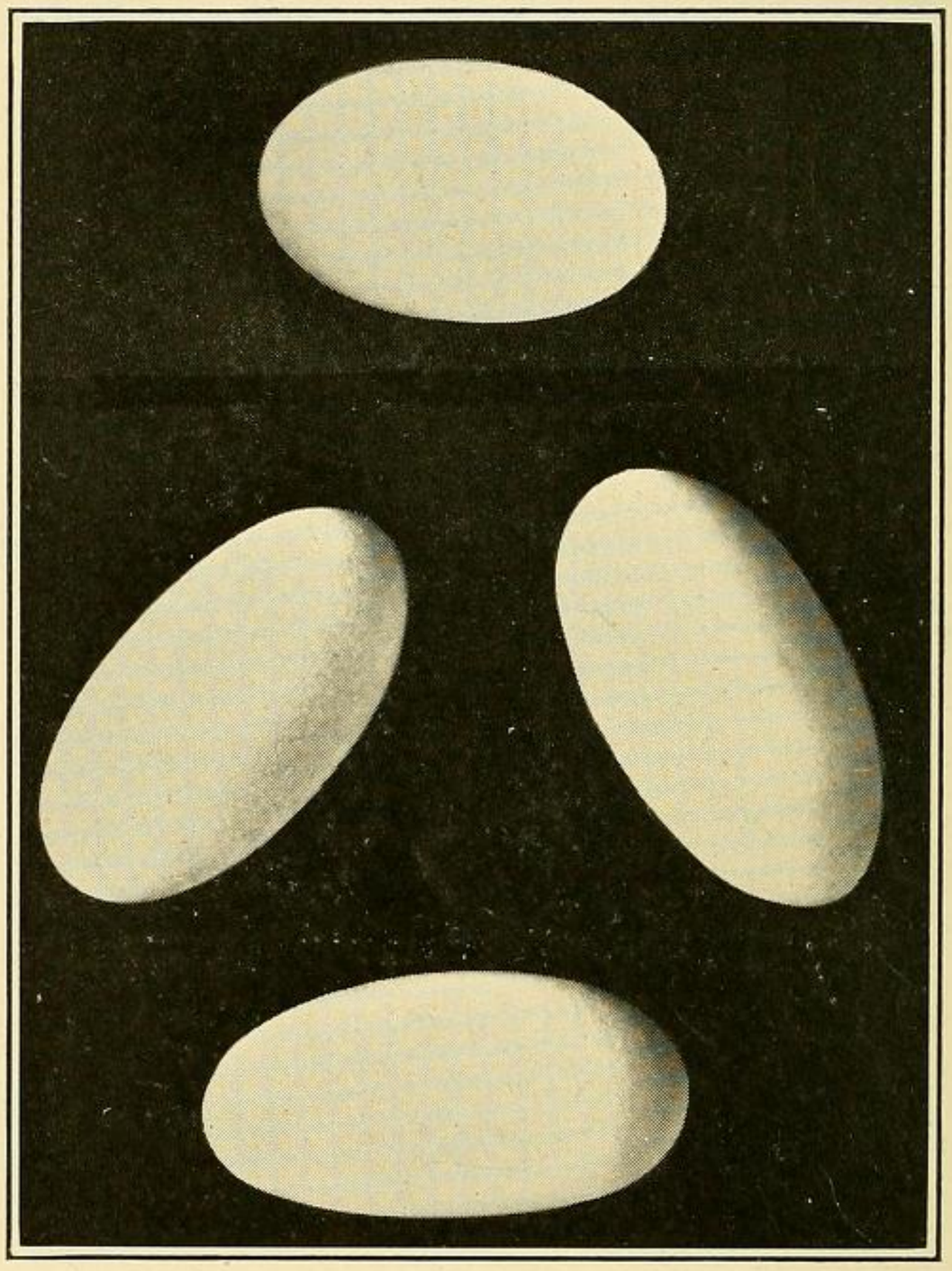
Our common Spotted Turtle is so well known that it requires no special description. The upper shell is always black, with scattered, round, yellow spots; the plastron may be yellow or salmon color, with a central figure of black, the latter subject to great variation. The head is black with yellow markings, particularly with a deep yellow spot over the auricular opening.

This familiar pond turtle is almost entirely aquatic by habit, being found in streams, ponds, ditches with water in them, etc. It feeds under water, and will eat of the leaves of certain plants, such as lettuce and the like. The male has a long tail and the female a very short one. It occurs from Northern Maine to North Carolina, westward to the Mississippi Valley. It rarely exceeds four inches in length of shell or carapace.

The Western Pond Turtle, with habits quite similar to the last, is also a blackish species, yellow spots and dashes marking each shield of the carapace, the dashes running from the shield's centre to its margin in every instance. The brown limbs are spotted with yellow or black, as is also the head. This is a Pacific Coast species, and the only species of pond turtle of that entire region.

Muhlenberg's Turtle is also a black species with yellow blotches on its plastron, and a very distinctive bright orange spot on either side of the head, not far from the auricular opening. It runs about four inches for the length of its shell, and is aquatic in its habits. Thus far it has been found only in New York, New Jersey and Pennsylvania—Staten Island being the centre of its abundance.

Coming to the Wood Terrapin, a species I have had in confinement for months at a time, we have under consideration a species that is strictly a *land tortoise*, which may attain a length of carapace of seven inches. It is fond of damp woods, and takes to the water only as it rambles around through them. The



species is of an affectionate disposition and wonderfully intelligent for a chelonian. This is an entirely different reptile from any of the foregoing species, its carapace having a conspicuous keel, each shield of which is deeply marked with concentric grooves, giving the while a sculptured appearance as though done with some tool or other. This shell is of a pale earth-brown, with radiating yellow lines and various spots on each shield. Limbs and top of head dull salmon color, or in some specimens a brighter red.

Doubtless there are a number of anatomical points that are quite different in the Wood Terrapin, as compared with the corresponding ones in any of the three Pond Turtles described above. As to its external characters, they are each and all entirely different when we come to contrast them with those of the Spotted Turtle, of the Western Pond, and those of Muhlenberg's Turtle.

The distinctive external characters of the three pond turtles on the one hand, and the Wood Terrapin on the other, have, together with their habits, been sufficiently set forth above, obviating the necessity for their tabulation here. The marked differences have long been known to herpetologists who are familiar with them. All this points to the fact that the Wood Terrapin is an entirely different species of reptile from any of the Pond Turtles. This being the case, it represents a different genus among chelonians, and this difference should be recognized through drawing the necessary generic lines.

I therefore here suggest that the three above referred to Pond Turtles, now in the genus *Chelopus,* be removed from that group and made to form a genus by themselves, for which I propose the name of *Melanemys,* which refers to their general black color. These turtles will then stand thus:

Melanemys guttatus
Melanemys muhlenbergii
Melanemys marmoratus.

The Wood Terrapin will remain *Chelopus insculptus,* which is the name it now bears in science.

Lots of men are liars who never even tried to catch a fish.

Hard work always stands at the top of the list of factors in success.

Marine Aquaria

At the meeting of the South Australian Aquarium Society, in March, the presidential address was delivered by Mr. Edgar R. Waite, F. L. S., who demonstrated the principles and practices of the marine aquarium. After detailing some of the physical properties of sea water, its density, salinity, composition and so on, Mr. Waite remarked:

"In keeping aquaria we seek to translate to our own homes a little bit of Nature, one of the bits of which few people have any knowledge. We do not, however, try to reproduce the mountain torrent, which may have a fauna and flora quite its own, not even the conditions found in an ordinary stream. We rather attempt to copy the stagnant, often slimy pool, whose surface may be forbidding, but whose water beneath is often clean and limpid. Such a pool inclosed in glass walls we can nowadays place in our rooms and preserve in excellent condition with very little attention.

Turning to the immediate subject of our discourse, we may ask where shall we find a similar ocean pool? The answer must be a negative one, and it is evident, therefore, that the conditions required for maintaining a marine aquarium must be different from those with which we are familiar as votaries of freshwater aquaria. The ocean is ever in motion, and its waters are being continually revivified by its often enormous billows. We cannot, therefore, attempt to translate a cubic yard of open ocean to our drawing room. On rocky shores we often find pools left by the receding tide, full of sparkling water and bright green seaweeds, among which lurks a wealth of life. This, then, must be our guide, but it is to be remembered that

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