

of these cracks the eggs are hung from the roof like a little bunch of grapes (Figures 2 and 3). Rarely a similar cavity within a decaying stump is selected. All the localities in which *Plethodon* has been found contain conifers and almost without exception it is in coniferous wood that the eggs have been found; though the adults may be found plentifully in wood of all kinds. Usually the eggs are placed from three to five inches beneath the surface of the log, at which depth its substance is constantly moist, and it can well be imagined that the air is saturated with water vapour. They are always accompanied by the female and if in exposing them she has not been alarmed she will be found holding the dorsal surface of her head and neck against the under side of the bunch. That it is the female that remains on guard was determined by the dissection of over twenty specimens. In only one case was a male found by eggs and then in company with a female; the eggs were several days advanced in development and the presence of the male was perhaps merely an accident. Cope ('89) and Montgomery ('01) speak of finding the animals and their eggs under stones but if the above mentioned shelters are available they are always preferred. Wilder ('94) notes that the adults are seldom to be found under stones. Sherwood ('95) gives the habitat as beneath logs and stones, while the eggs are to be found in damp moss and beneath the bark of decaying stumps.

Among Urodeles that do not lay their eggs in water contact between the body of the female and the eggs seems to occur in all cases; *Amphiuma* (Hay '88) and *Autodax* (Ritter and Miller '99, and Ritter '03) coil round them, *Desmognathus* (Wilder '99) inserts herself among the eggs wearing them like a necklace or belt. *Plethodon oregonensis* (van Denbrugh '98) is described as holding the bunch in a loop of her tail and moving them from place to place. But as this was after removal from their natural surroundings it is quite possible that the eggs had been torn from their original support and that part of the mother's uneasiness arose from their unattached condition. The Cæcilians (Gadow '01) also when not viviparous coil round their eggs.

The number of eggs in a cluster varies from three to twelve. The number of ovarian eggs in advanced condition, in specimens taken just before the egg-laying season is also within these limits and the length of the incubation precludes a second brood in the one year. Consequently the preservation of the species must depend upon the larval stages being so perfectly adjusted to surrounding conditions that the mortality is very small, rather than—as is the case with most Urodeles—upon the production of large numbers of young. The slender and almost cylin-