path, to see him before treading upon him. Secondly, because if you carelessly step on the little round cactus so common in this region, the spines, if they do not puncture the sole of your shoe, will penetrate the upper leather more surely than needles. In the eyes of an eastern collector, accustomed to look for land shells in moist, shady places, it is not a promising country. There are no woods, except on the mountains, and few streams of water around whose banks mollusks might be expected. Yet there are shells all around.

Find a cactus that is dead, and turn over its fallen leaves with a stout stick. Like the watermelon, a cactus seems to carry its own water, and under this moist, decaying mass the little Pupas may be found, and Helix Stearnsiana Gabb takes shelter from the sun. The night dews are heavy, and doubtless when darkness falls, the snails emerge from their hiding places, and browse around for food.

Another favorite collecting ground is a pile of loose rocks; if on the south side of a hill, where the sun beats hottest, so much the better. Turn over every stone until the damp earth is reached, and your eyes will be gladdened by the sight of the elegant dark brown shiny Glyptostoma Newberryana W. G. B. If the rocks are in the midst of shrubbery and herbage, the large beautifully banded Arianta tudiculata Binn. is likely to be found. Very rarely do any of these shells live on the shaded northern slopes, doubtless because where the ground is less heated during the day, less moisture is condensed at night. In this country, then, the collector truly earns his prizes by the sweat of his brow.

One other land shell is the Succinea Oregonensis Lea, of a reddish golden hue, found on the weedy river banks, and living only a little less in the water than its frequent companions Limnæa Adelinæ Tryon, and Physa Gabbii Tryon. These are the common shells of the open country, although far from numerous in individuals, when one considers the hours of diligent labor necessary to procure a reasonable number.

WHAT IS A SPECIES?

BY CHARLES T. SIMPSON.

In view of the practice of naming *everything* now-a-days by the so-called new school of conchologists, we may well ask the above question. Agassiz in classifiying animal life says, that "species are

distinguished by size, proportion, color, habits, and relations to surrounding objects and circumstances." Like many things which we understand very well, the word is difficult to define. It is almost impossible to say just what differences are required to constitute a species or a variety. Perhaps so far as the study of conchology is concerned this definition will answer: *A mollusk which differs from all allied forms by certain distinct constant characters is entitled to specific rank.* As a friend remarked to me: "It is not so necessary that the differences between species be great as that they are constant." Any character or characters of real value that are always present on a shell ought to entitle it to a name; while no matter how marked they may be in individuals, if they imperceptibly fade into those belonging to what have been considered to be other species, they are worthless for purposes of classification. The merest novice who has given any attention to the subject, either collecting or examining cabinets of shells, knows something of how individuals of a species vary. This variation is very often produced by the circumstances by which a mollusk is surrounded,—locality, depth and condition of water, different kinds of soil and bottom, height of elevation on mountain sides, climate and the like. Baron von Tiesenhausen states that Helix cingulata, a smooth shell, is found in the valleys of Austria, H. cingulata var. colubrina, a little mottled and sometimes slightly ribbed, about half way up the mountains, and H. gobanzi, which is only perhaps a strongly ribbed form of cingulata, lives near their summits. Fasciolaria tulipa, when found in quiet muddy bays is a coarse shell with strongly-marked revolving ridges, of a dirty brownish or ash color and scarcely variegated at all; and is in every way inferior to the much larger, finely developed, smooth and handsomely variegated specimens taken in the open sea. Natica duplicata, from the vicinity of New England, is a coarse shell often flushed with brown or brownish-yellow, while specimens from the open water in the Gulf of Mexico are smooth and polished, livid in color, or even almost white. The same shell, though, when found in brackish water on the Florida coast, is more like the New England form, but is never brownish in color that I have seen. Cyrena floridana is a most variable shell even when a number are taken from the same bed; so much so that Conrad who just named it, subsequently gave to other very different specimens the appellation of C. protexta. In color it ranges from a dark purplish crimson, through purple and pink to white, and individuals may be found of

almost every tint of blue; and in form it may be oval, the posterior end may be truncated as in Unio elegans, or it may be so drawn out as to be scarcely distinguishable when small, from Venus flexuosus. Were there no connecting links I could make a half dozen good species from the shells in my collection. Some specimens have an epidermis almost as rough as its congener C. carolinensis, while in others it is almost totally lacking. In all the species I have cited there are connecting links which show that these variations are merely forms of one and the same thing.

In view of these facts and numberless others which could be given of the extensive variability of species, and measured by such a definition as I have given of the word, how ridiculous is the practice of naming every possible variation and form, now so much in vogue with the new school of conchologists; a practice which, I am sorry to say, is not confined to them alone, nor to the present time. M. Bourguignat, who may be fairly considered a representative of this school, says he knows 162 species of Helix of the group Pomatia, and that of these he possesses 151. And he classifies them into two grand sections and nineteen series! One feels like using the language of the happy father who, when the nurse presented him with triplets, the results of a single birth, exclaimed in utter astonishment, "Great Scott! did any get away?" Why don't they name and describe every individual shell and be done with it? This would certainly be one way out of the dilemma.

(*To be continued.*)

DESCRIPTION OF A NEW SPECIES OF OCINEBRA.

BY F. C. BAKER.

Ocinebra jenksii Baker.

Shell fusiform, thick, ash-colored, shouldered on the whorls; whorls 7½, two apical smooth, rounded, white; the second is but little larger than the first; the third is provided with a distinct carina about midway of the whorl; the rest are strongly shouldered and angular. There are on each whorl nine to ten longitudinal ribs, crossed by ten very strong, coarse liræ, which cut the surface of the shell into coarse reticulations. The spire is high, pointed, and occupies about half the length of the entire shell. Aperture oblong-ovate, choco-