

ent region, and it may not be found in it at all, except, perhaps, near its junction with the Holston.

The presence of the species in the Cumberland offers a possible explanation for its occurrence in the Ohio below Cincinnati and in the Wabash. But that, of course, can not be definitely determined until all of the southern tributaries of the Ohio, which head in the mountains of West Virginia, have been carefully explored. If the species should be found in the Big Sandy or the Great Kanawha, for instance, it would seem likely that it reached the Ohio from that source, even though, at the present time, it is not found in that river above Cincinnati.

But, however that may be, these new records tend to confirm the opinion that the original point of dispersal of the species was in the head-waters of the Tennessee system and that its present distribution is "rather the result of an ancient migration from the northeast than one from the southwest."

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#### LAND MOLLUSCA AT TOLLAND, COLORADO.

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BY T. D. A. COCKERELL.

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On August 23 and 24 my wife and I collected snails at Tolland, in Gilpin county, Colorado, at an altitude of 8900 to 9000 feet. The list of species, though short, may be of interest on account of the high altitude, and the addition of one species to the Colorado list.

*Agriolimax campestris montanus* (Ingersoll). Variable, some very dark.

*Vitrina alaskana* Dall. Abundant.

*Euconulus fulvus alaskensis* Pilsbry, abundant.

*Vitrea radiatula electrina* var. *alba* (Jeffreys) Taylor. One.

*Zonitoides arboreus* (Say). Common under *Populus tremuloides*.

*Punctum pygmæum minutissimum* (Lea). My wife found two by carefully searching over dead leaves from the *Populus tremuloides* zone. I believe only one specimen of this species has previously been found in Colorado. Taylor (Monog. L. & F. W. Moll. Brit Is.) cites Willow Creek and Cloudcroft, but the latter locality is in New Mexico.

*Sphyradium edentulum alticola* (Ingersoll) The adult is over



2½ mm. long, and is to be compared with the European variety *columella* (Von Mart.) or *gredleri* (Clessin).

*Vallonia cyclophorella* Ancey. Abundant.

*Pyramidula cronkhitei anthonyi* Pilsbry. Not uncommon.

*Cochlicopa lubrica* (Müller). One.

*Pupilla muscorum* (L.). Several of the typical edentate form.

*Pupilla blandi* Morse. Common.

*Pupilla syngenes dextroversa* P. & V. New to Colorado. One shell, 4 mm. long, nearly 2 broad; whorls 7½, the upper ones not swollen as in typical *P. syngenes*.

*Vertigo modesta parietalis* (Ancey). Common. Rather small for *parietalis*, but over 2 mm. long; palatal plicæ long, as in *concinnulla*; shell clear chestnut; aperture strongly elbowed above. This is apparently a distinct race, between *parietalis* and *concinnulla*, but hardly recognizable by a separate name. Ancey's name, *ingersolli*, certainly included such forms as this, and could be so restricted without much risk of error.

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#### NOTES.

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NOTE ON EPIPHRAGMOPHORA INFUMATA GLD.—In Mr. Edson's interesting paper on the Land Mollusca of San Mateo Point, California (on the western shore of San Francisco Bay), in the June NAUTILUS (Vol. xxv, p. 17), occurs a statement as to the habitat of *E. infumata* Gld. which needs correction. While he states the southern limit of this form as Santa Rosa, which is about 50 miles north of San Francisco, I have collected it for many years on the eastern side of San Francisco Bay, in Alameda county. In his Manual of American Land Shells (U. S. Nat. Mus. Bull., No. 28), Mr. Binney also mentions the Bay region and Alameda county as its home as far back as the year 1885. The shells found here are the extreme form of this species (or var. of *E. fidelis*?), being black, highly carinate, heavily hirsute, and bearing the scales mentioned by Dr. Gould in his description well marked, as distinguished from the specimens from Marin county and further north.

As to the typical *E. fidelis*, collected at San Mateo Point by Mr. Gifford, it seems clear that they were chance specimens or exotic. I might hazard an opinion that this form became introduced through the oyster traffic in which, years ago, the native Washington bivalve



Cockerell, Theodore D. A. 1911. "Land Mollusca at Tolland, Colorado." *The Nautilus* 25, 58–59.

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