

39. *Limnea ampla* Migh. Lake.  
 40. *Limnea calascopyum* Say. Lake.  
 41. *Physa ancillaria* Say. Lake.  
 42. *Physa sayii* Tapp. Lake.  
 43. *Physa heterostrophæ* Say. Lake.  
 44. *Planorbis campanulatus* Say. Lake.  
 45. *Planorbis trinoidis* Say. Lake.  
 46. *Planorbis bicarinatus* Say. Lake.  
 47. *Campeloma integer* Say. Lake.

## NEW SOUTHERN UNIOS.

BY BERLIN H. WRIGHT.

*Unio conjugans*, sp. nov.

Shell thick, solid, inflated, inequilateral, quadrate; dorsal margin arched, posterior margin truncate and submarginate, basal margin emarginate, anterior margin uniformly rounded; umbos rounded, umbonal ridge prominent, with a marked depression in front; epidermis dark chestnut; tuberculate throughout, the tuberculations being without apparent order of arrangement or uniformity of shape, except that they expand downward and each base terminates at a growth-line, and near the base of the shell they become joined into two broken ridges on the anterior half of the shell; cardinal teeth very heavy and deeply serrated, those in the left valve being triplicate and those in the right valve double; lateral teeth, which extend to the abrupt posterior dorsal angle, are solid, depressed, curved and comparatively smooth; anterior cicatrices deep, contracted and barely distinct; posterior cicatrices well impressed and widely separated; pallial line deeply impressed and the pallial margin much thickened in the anterior portion; dorsal cicatrices many, small, and arranged in a long oblique row under the cardinal teeth; beak cavity deep, wide and bluntly terminated; nacre dead white with large umbraceous spots. Width  $3\frac{1}{4}$ , length  $2\frac{3}{4}$ , diam. 2 inches.

Habitat: Hiawassa river, Polk Co., Tenn.

Type in National Museum.

Remarks: Affinity, *U. blandianus* Lea and *U. tuberculatus* Barnes. This species fills the gap between these species, and removes the latter from the isolated position it has heretofore held, uniting the

members of the group into a continuous chain, one end of which is *U. cylindricus* Say, *U. cylindricus* Say var. *strigillatus* Nobis, *U. tuberculatus* Barnes, *U. conjugans* Nobis, *U. blandianus* Lea, *U. asperimus* Lea, etc., and at the other extreme *U. nodiferus* Con.

Anteriorly the shell reminds one of tuberculatus, except that it is much more inflated in that region. Posteriorly it resembles *blandianus* Lea = *rumphianus* Lea. It is wider and more inequilateral, however, than that species.

(To be Continued.)

**PISIDIUM HANDWERKLI, N. SP.**

BY DR. V. STERCK.

Among a lot of *Pisidia* from the Lilycath Creek, Joliet, Ill., collected and sent for examination by Mr. J. H. Handwerk, in 1898, there were a few specimens of evidently a new species. Yet it needed confirmation by more materials. But all efforts of Mr. Handwerk to secure more examples were in vain until a few weeks ago, when he sent a lot of several thousand specimens from the same creek, containing *P. compressum*, *fallax*, *cruciatum*, *punctatum*, one of the *abditum* group, and a few dozen of the *Pisidium* under consideration, which is now confirmed as a n. sp. and named in honor of its discoverer.

Mussel small, rather rounded in outline, rather high, moderately inflated; beaks moderately large, somewhat papilliform; superior margin strongly, inferior moderately curved; posterior rounded or slightly truncated, anterior end rounded or with a slight indication of an angle; surface with dense, almost regular and sharp striae, and with a silky gloss, tops of beaks smooth and shining, slightly flattened; color of epiconch pale to yellowish horn; shell rather strong, nacre colorless or whitish, hinge stout, strongly curved, plate moderately broad, lateral teeth stout, rather high, short; cardinal teeth small, fine; the right one angular, with the posterior part somewhat thicker, inserted in a longitudinal groove on the hinge plate, formed by a sharp, tooth-like prominence along the lower edge of the plate; posterior cardinal tooth of the left valve rather long, longitudinal, nearly straight, its ends sloping; anterior oblique, quite small, or almost obsolete; ligament rather small.