

*lutescens*.) They are suborbicular in outline, lobed and rooting underneath, as in the true terrestrial species. They also have rudimentary scales at the apices of the lobes underneath. These fronds become immersed by the autumn rains, and during the winter the apices of the lobes thicken and expand greatly. These apices being destitute of rootlets and extremely buoyant, gradually assume a vertical position in the bottom of the pool, and at length (in the spring) become detached and rise to the surface of the water; (where they float in a horizontal position,) often carrying with them portions of the effete base of the frond. In the meantime the scales develop into long purple fringes. *These floating apices alone constitute the L. natans of Linnæus and authors:* (vide Aust. Hep. Exsic. N. 144, A.; also Lindbg. Monogr., p. 115, t. 21 and 32; etc.) They fruit copiously in the vicinity of Albany, N. Y., in the months of May and June (Prof. C. H. Peck). Sometimes the autumn fronds do not become immersed, in this case they remain whole; again the fertile fronds are often left upon the mud by the dessication of the pool in summer; in this case they are plainly continuous from the apex: (vide Hep. Exsic. N. 145; also Herb. Tayl. (in part), under the name of "*Riccia velutina*.—N. Amer. Drummond."

*RICCIA LUTESCENS*, Schweinitz.

A single frond only of this species was found by me in Sept. 1858, at Closter, N. J. This frond contained a single sporangium! which is about as in *R. crystallina*. The spores are also as in that species. During the past eight years I have not only watched this plant in all the stages of its growth, from the time of its first appearance in the month of June, until its final disappearance in winter, but have collected many specimens of it in the mature state. I have also received numerous specimens of it from many localities, from New England to Canada and Missouri; but not a single one of these specimens shows any trace either of fruit or other kind of reproductive organ whatever! and it is still a mystery how the plant reproduces itself. The young plants make their appearance in great profusion, in the bottoms of exsiccated ditches, &c., in the beginning of summer. These rapidly develop into the sterile plant, which has been most accurately described and figured by Mr. Sullivant: (*Mem. Amer. Acad. Arts & Sci.* (Boston) 4, p. 176, t. 4.) No rootlets are produced underneath the frond above the middle; and as the ditches become filled with water late in autumn, the fragile laciniae break asunder near the middle, in consequence of the extreme buoyancy of their apices. The detached pieces (or apices) rise to the surface of the water, where they remain suspended in an oblique position (the extreme apex only reaching the surface), until they become frozen up in the ice. Upon the ice disappearing in the spring, no trace of any portion of the plant is to be found!

ridis; fronde  
o subsemipoli-  
i subcuneatis)  
inatis, subtus  
ob epidermidem  
tenuibus sub-  
m hyalinis  
us ad apicem  
rangia subtus  
prorumpentibus  
ngulatis natis  
culatis sub-  
t., No. 147.—R.

r, New Jersey;

and terrestrial  
its less divided  
the apex; and  
ex, by its lower  
the frond.

s on the under  
gether. These  
ts to the earth,  
the rootlets of  
the extremity,  
odies, arranged  
at these bodies  
productive organ

te vel olivaceo-  
colore, squamis  
min. long. 1½—3  
tenuem anguste  
; fructibus  
2—4 aggregatis  
prorumpentibus,  
rcte adherenti-  
bus, sporis parvis  
Hep. Bor. Amer.

erney; also near

sub-cavernous  
wards the apex, in  
ex. *R. nigrescens*,  
of the frond are  
her too meagre.

and by autumn  
Hep. Exsic. ined.  
the name of *R.*