

riance in Peabody by Mr. R. B. Mackintosh. In that town it grows in and about the old tanneries, but particularly in certain rather open cellars the floor of which is a surface of exhausted tanbark which forms a rich soil to the depth of several feet. In this situation the development of the fungus is truly astonishing. In one cellar under an old skating-rink it possesses the ground in its fruiting season. For weeks in September and October groups, almost groves of it eight or ten inches high, with pilei seven to nine inches broad, come up all over the ground, particularly about the bases of the cedar posts which support the floor above. A scratch in the soil anywhere shows mycelial strands extending horizontally at a depth of an inch or two. Some specimens collected here had bases as big as a door-knob with the hollow in the interior of the stem almost big enough to admit a lead pencil.

From this preserve the owner sold last year a number of pounds of the buttons to marketmen, but the experiment of introducing the fungus upon the market resulted unsuccessfully, the mushroom-buying public being conservative in taste, and also cautiously adherent to tradition. Notwithstanding this, and also in spite of Vittadini's condemnation of this *Lepiota* as unsuitable for the table, it can be said to be an excellent mushroom when properly cooked. Had Vittadini caused it to be placed with his favorite condiments in a closed dish, containing sufficient water to prevent drying, and had he then kept it in a hot oven for an hour, he would probably have had some more enthusiastic remark to make than that "having experimented upon it several times, even in considerable doses, he had suffered no inconvenience from it." He might have been inclined with some Boston mycophagists to rank *Lepiota rhacodes* with *Agaricus campestris* and *Coprinus comatus*.

EXPLANATION OF PLATE II. A natural cluster of about twenty undeveloped fruits of *Lepiota rhacodes* Vitt., found at Allston, Mass., in October, 1899, by Mr. G. B. Fessenden, who kindly furnishes the photograph. All of the buttons have advanced beyond the stage in which the pileus is covered by the enveloping membrane, traces of which may, however, still be discerned in the thin, ragged rim of the cup.

RANUNCULUS ACRIS, VAR. STEVENI, IN NEW ENGLAND.

M. L. FERNALD.

In the extensive collection of New England plants recently presented to the Gray Herbarium by Mr. Charles E. Faxon, was found a single sheet marked by its alert collector, the late Edwin Faxon, "*Ranunculus*

acris?" The inclosed specimen, differing from true *Ranunculus acris* in having very broad leaf segments instead of many linear segments, was collected at Franklin Park, Massachusetts, in late August, 1887. Comparison with the original descriptions, as well as specimens and figures, showed it to be the European *R. Steveni* of Andrzejowski. The attention of members of the New England Botanical Club was called to the plant, and during the past summer observations have been made by them and by botanical correspondents who have generously supplied the writer with specimens and notes from various sections of New England. Among others from whom much assistance has been received grateful mention is made of Miss M. P. Cook, who has furnished notes and specimens from several stations in eastern Massachusetts, Mr. C. H. Knowlton, who has supplied material from Franklin Co., Maine, Miss E. L. Shaw, who has collected forms of the plant in eastern Massachusetts and on Mt. Desert Island, and Mrs. E. H. Terry, who collected at Jefferson, New Hampshire, a most interesting series of foliage variations, and who has since supplied notes from Northampton, Massachusetts.

From the observations of these and other correspondents, and personal studies of the writer and others in Maine and New Hampshire, the conclusion is drawn that the real *Ranunculus acris*, with the leaf-divisions cut into many linear segments, is, at least in the northern part of New England, much less common than the broad-leaved plant generally known in Europe as *R. Steveni*. During the recent session of the Alstead School of Natural History the plant was carefully watched in western Cheshire County, New Hampshire. On the high plateau about Alstead Centre the broad-leaved plant is abundant, but the finely cut foliage of true *R. acris* is rarely seen. In the region of Walpole, however, the latter plant appeared to be as abundant as *R. Steveni*. Though in the region of Alstead and in sections of Maine where the buttercups have been watched the two forms are usually strongly marked, and, as at Alstead Centre, one of them abounds to the practical exclusion of the other, it is no exception to find individuals bearing both coarsely and finely cut foliage. Other distinctions between the two plants have been searched for in vain. The foliage of *R. Steveni* appears in the field much thicker and heavier than that of *R. acris*, but this is apparently due to the narrow leaf-divisions of the latter plant. The flowers and fruit appear identical in the two forms. With no other difference than this purely habital one, the breadth of the leaf-segments, the plants, although generally very marked as to this point, can hardly be maintained as distinct

species. In Europe the broad-leaved form has generally been treated as a species or at least a subspecies of *R. acris* under Andrzejowski's name *R. Steveni* or the earlier name *R. sylvaticus*, Thuill. It is so treated by Reichenbach, who gives excellent plates of this and of true *R. acris* (Reichb. Ic. iii. t. 16 bis., 17).

By some recent authors, as Lange and Blytt, *R. Steveni* is treated as a variety of *R. acris* (var. *Steveni*, Lange, Haandbog Danske Fl., 380), and this disposition of the plant seems from its behavior in America to be the just one.

As already stated, in northern New England, *Ranunculus acris*, var. *Steveni*, Lange, is generally more abundant than the true *R. acris*. It has not been seen, however, from South of Hull, Massachusetts (*Miss M. P. Cook*), and Northampton (*Mrs. E. H. Terry*), but, as it is the predominant form at these places, it may be expected to extend over a broader range than we yet know. The true *R. acris* with many linear leaf-segments has been examined from Maine, New Hampshire, and Massachusetts, while from Rhode Island and Connecticut that form alone has been seen.

It is suggested that, as both forms of leaves are sometimes found on a single plant, the broad-leaved var. *Steveni* may be a seasonal state of the narrow-leaved *R. acris*. That this is not the case, however, seems probable from the fact that in late summer, when the foliage of var. *Steveni* was conspicuous in the fields, well developed plants of the true *R. acris* were also found; and, furthermore, if these two forms were seasonal developments of one plant, it seems improbable that they should have been so long distinguished abroad by such men as Thuillier, Andrzejowski, Reichenbach, Lange, Blytt, Hartman, Nyman, and many others.

GRAY HERBARIUM.

THREE PLANTS OF BERKSHIRE COUNTY, MASSACHUSETTS. — For several years I have noticed in a peat bog, in Stockbridge, Mass., a handsome willow, growing as a shrub fifteen feet or less in height. The persistence, or late ripening of the fruit is particularly characteristic; a branch collected September 24, still retains its half opened capsules. The willow grows plentifully in beds of sphagnum, in company with *Betula pumila* L. and *Sarracenia purpurea* L. Mr. C. E. Faxon, who has kindly examined a branch, pronounces it *Salix amyg-*



Fernald, Merritt Lyndon. 1899. "RANUNCULUS ACRIS, VAR. STEVENI, IN NEW ENGLAND." *Rhodora* 1, 227-229.

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