

form in more than one of the characters above denoted, two or more letters with the appropriate symbol are affixed. The use of Greek letters is reserved for those forms which I would denominate *lusus*.

I proceed to give diagnostic characters for the species and the more remarkable subspecies and varieties with which I am acquainted, subjoining occasionally critical observations derived from notes made in the course of an examination of the specimens contained in my herbarium. Such further information is added with respect to the distribution and synonymy of each species as appeared to rest on trustworthy authority.

LEONTODON, L. Involucrum imbricatum. Achenium columnare, sæpius in rostrum sensim attenuatum. Pappus conformis, persistens, plumosus, radiis exterioribus interdum brevioribus eplumosis. Plumulæ radiorum fere semper persistentes. Receptaculum subnudum.

Sect. I. **OPORINA.** Radix præmorsa. Pappi radii subæquales, omnes plumosi, ad basin dilatati serrulati. Capitula virginea erecta. Pili simplices.

1. *L. autumnalis*, L. Radice undique fibrosa; scapo diviso; foliis lineari-lanceolatis, vix acutis; pedunculis superne incrassatis, squamosis; acheniorum suberostrium costæ rugulosæ.

A. foliis pinnatifido-dentatis, lobis integris, subobtusis, linearibus; herba tota pilis simplicibus adspersa.

Hab. in graminosis Europæ præsertim septentrionalis frequens. Nascitur etiam in America boreali, dubitant tamen cll. Torrey et Gray an vere indigenus.

A + f. var. *pratensis*, foliis pinnatifido-dentatis; involucro fusco-villoso; scapo foliisque pilosis.

Hab. sparsim in pratis humidis. (Habui a *Scavaig*, *Isle of Skye*, Prof. Balfour; legi prope Cracoviam, et in montibus prope *Ambleside*, in Angliæ Comitatu *Westmoreland*.)

Syn. *Apargia pratensis*, Link.

-I, -d, + g. subsp. *palustris*, scapo subsimplici; foliis subintegerrimis, obsolete dentatis, glabris; capitulis parvis, in pedunculum attenuatis; involucri squamis glabris, atrovirentibus.

Hab. in paludosis, tam montanis quam maritimis. (Legi in Anglia, *Westmoreland Mountains*; *Black Mountains*, *Breconshire*; et in Hibernia, *Salt marsh by the Boyne near Drogheda*.)

+ F, -D, -I. subsp. *borealis*, scapo simplici, foliis subintegerrimis, obsolete dentatis; involucro fusco-villoso.

Hab. in torfosis subalpinis Europæ septentrionalis. (*Clova Mountains*, Prof. Graham et Prof. Balfour; *Sutherland*, Prof. Balfour; legi in Hiberniæ monte *Lugnaquilla* et in Scotiæ montibus *Grampians*.)

Syn. *Hieracium Taraxaci*, L. *Apargia Taraxaci*, Sm.

Syn. *L. squamosum*, Lam. *Apargia alpina*, Willd. (*L. alpinum*, Jacq. sequenti referendum monente cel. Koch.)

+ **E**, — **g**. subsp. *aurantiacus*, involucre pube brevi farinoso adsperso; scapo minus incrassato; ligulis aurantiacis.

Hab. in alpibus Carinthiæ et in Apenninorum jugo. (Legi prope *Heiligenblut*, Carinthiæ, et supra montem *Corno alla Scala* in Apennino Bononiensi.)

Syn. *L. aurantiacus*, Ten. (an Rehb.). *Apargia aurantiaca*, Kit. ?

This species and the glabrous forms of the succeeding one sometimes much resemble each other, especially before the formation of ripe fruit, but the characters assigned, especially the form of the leaf and the disposition of the denticulations towards the base of the leaf, will generally suffice to distinguish the present species.

I have not verified the character pointed out by Koch, in the narrow base of the rays of the pappus.

5. *L. hastilis*, L. Radice præmorsa, undique fibrosa; scapo monocephalo, sub-esquamoso, apice parum incrassato; foliis oblongo-lanceolatis, plus minusve inæqualiter dentatis, dentibus versus basin retrorsis; pilis bi-trifurcatis; involucri foliolis oblongo-linearibus; achenii erostris, costis parum rugulosis.

A. foliis, scapis, involucrisque hirtis; foliis profunde dentatis, lobis triangularibus angulatis.

Hab. in Europa et Asia temperata vulgaris, valde ludibundus; variat.

+ **d**. scapo inferne bifurcato (legi in Monte *Righi* Helvetiæ).

— **g**. pilis frequentioribus brevioribus incanus, frequens in apricis Europæ, præsertim australioris.

+ **i**. foliis acute runcinato-pinnatifidis, lobis dentatis.

Syn. *L. crispus*, Reich. et Thomas, non Vill.

Habui ab ipso cl. Reichenbach, atque iterum ab E. Thomas ad *Zermatt* in Valesia lectum. Ipse legi, in Galliæ montibus *Arverniciæ* et *Delphinatus*, et in Italia superiori juxta *Lacum Larium*, necnon in convalle *Leventina*.

Adsunt etiam varietates plurimæ quæ subspecies sequentes appropinquant.

Syn. *L. hispidum*, L. *Hedypnois hispida*, Sm. *Apargia hispida*, Hort. *Hieracium incanum*, Poll.

+ **G**. subsp. *danubialis*, foliis, scapis, involucrisque glabris, seu pilis raris furcatis nonnunquam etiam simplicibus adspersum. Frequens in montanis et umbrosis Europæ fere totius, sed omnino desideratur in Anglia et Hibernia ubi species frequentissime occurrit. (Habui etiam ex Persiæ Monte *Elbruz* a cel. Kotschy.)

Syn. *L. hastilis* β . *glabratus*, Koch. *L. hastile*, L. *L. danubiale*, Jacq. *Apargia hastilis*, Willd. variat. + **e** — **e**, + **i** & — **i**.

+ **I**, + **g**. subsp. *hyoseroides*, foliis fere ad costam usque pinnatifidis, pinnis angustis, sinuato-dentatis; herba viridi, glaberrima, seu pilis nonnullis longiusculis adpersa. Legi in sinu alpino *Trift* dicto, prope *Zermatt* in *Valesia*.

Syn. *L. hyoseroides*, Welw. (?)

— **E**. subsp. *montanus*, scapo crassiore, superne magis squamoso; foliis latioribus, minus divisis, viridibus; involucri foliolis latioribus. Achenia videntur paululum longiora et magis muricata.

Habui a monte *Fouly* in *Valesia* ab E. Thomas, formam vix diversam legi in alpihus *Sti Gothardi*, et in *Pyrenæis orientalibus*.

Syn. *L. dubius*, Reich. *Apargia dubia*, Hppe.

The ordinary forms of the typical species and of the subspecies *danubialis* and *hyoseroides* are easily distinguished from the allied species by the irregular and unsymmetrical manner in which the leaves are cut and divided; the nearly entire-leaved varieties however, especially those of the subspecies *montanus*, approach very near to *L. pyrenaicus*, as has already been remarked, but I believe that the characters given in the leaves and the fruit will always suffice to distinguish the two species. The entire absence of a subspecies so widely spread as *L. danubialis* from the region of the British flora, is worthy of particular remark as bearing upon some of the arguments upon the question of the origin of species derived from their distribution through definite areas of space.

6. *L. caucasicus*, Fisch.? Radice præmorsa(?); scapo tenui glabro; foliis runcinato-pinnatifidis, lobis conformibus angulatis retrorsis, cum involucri pilis raris simplicibus, vel nonnunquam furcatis, adperso; involucri foliolis lineari-lanceolatis, acuminatis, achenio erostri, vix (aut ne vix?) muricato.

Hab. in subalpinis *Caucasi* (D.C. Prod.). Habeo specimen unicum incompletum a cl. R. F. Hohenacker.

Syn. *Apargia caucasica*, M. Bieb. (?); Reich. Fl. Exc. 853 (?).

The single imperfect specimen in my herbarium appears to me to be in all probability the plant of Bieberstein, but there are some slight differences between the description above given and that of the author. My plant approaches very nearly in appearance to some forms of *L. hastilis* + **G**, but I distinguish it by the generally simple hairs, and still more certainly by the regular and symmetrical divisions of the leaf, which resembles that of *Aposeris fœtida*, Less., but the lobes are more decidedly deflexed. The character here noted in the divisions of the leaf is of much importance in the *Cichoraceæ*.

7. *L. anomalus*, nobis. Radice brevi, obliqua, parce fibrosa; scapo monocephalo, supra medium hinc inde squamis linearibus instructo, cum foliis et involucri pilis rigidis bi-tri-uncinato-furcatis obtecto;