I. Pulneyensis. *Bracteæ* glandula terminatæ. *Calcar* non gibbosum. *Hab.* Mont. Pulney, alt. 8000 ped.

§ D I. parvifolia. *Folia* minuta, cuneata. *Pedunculi* axillares, solitarii, elongati.
Hab. Mont. Akka, alt. 8000 ped. (aff. *I. pendulæ*).

§ E I. parasitica. Omnia ut videtur *I. viridifloræ*, sed alarum lobus superior sub vexillo reconditus.
Hab. Mont. Anamallay, alt. 5000–6000 ped.

I. elegans. Erecta. *Calcar* 0. *Semina* pilosa.

§ F I. Tangachee. *Pedunculi* folia longe superantes, apice 4–8-flores. *Flores* minimi. *Calcar* gracile.

§ G I. Wightiana. Suffruticosa. *Folia* anguste lanceolata. *Pedunculi* solitarii, petiolum paullo excedentes, per totam longitudinem floriferi. *Calcar* breve, incurvum.
Hab. Mont. Anamallay, alt. 4500 ped.

I. phœnicea. *Calcar* apice inflatum.
Hab. Mont. Pulney, alt. 7000 ped.

Lieut. Beddome's paper supplies the following additional habitats and elevations to Peninsular species:—*I. scapiflora* attains 7000–8000 feet; *I. rivalis*, 3000 feet; *I. viscida* and *I. campanulata* ascend to 7000 feet; *I. maculata* grows on the Anamallays at 4500 feet.

I. filiformis is, according to Beddome, distinguished from *I. inconspicua* by the glabrous pedicels, and *I. cordata* from *I. viscida* by the peduncles not being viscid.

On the *Fumaria capreolata* of Britain.

By Charles C. Babington, Esq., M.A., F.R.S., F.L.S.

[Read November 17, 1859.]

It is several years since there was considerable discussion amongst those botanists who take an especial interest in the accurate determination of British plants, concerning a *Fumaria* which grows plentifully in the Channel Islands, Western Cornwall, and near to the coast of Wales. It was then determined by Mr. Mitten (Lond. Journ. of Botany, vii. 556) to be the *F. agraria* (Lag.), and I, confidently believing that that identification was correct, gave a tolerably full description of it (Bot. Gaz. i. 62) under that name. At the same time I referred some Azorean specimens, received from Mr. H. C. Watson, severally to the *F. agraria* (Lag.), *F. muralis* (Sond.), and *F. capreolata* var. *media* of Webb. Concerning this, Mr. Watson remarked that, "to his eyes, after examining scores of the Azorean *Fumarias*, living and dried, they

seem all to belong to one species, and to be so little different, and so gradually dissimilar, as to be scarce worthy of separate names, even in the light of varieties only" (Phytol. iii. 805). As will shortly be seen, I now think that he was nearly, if not quite correct in those remarks. Opinions formed after the examination of only a few very imperfect specimens, and therefore little more than guesses, are never either conclusive or satisfactory. Mr. Watson's own view, which was founded upon scores of specimens examined when alive, is, of course, nearly conclusive against that formerly held by me. Of the three Azorean plants then noticed (Bot. Gaz. *l. c.* 63 & 64), two certainly do seem to belong to one species: the third (sent by Mr. T. C. Hunt from St. Michael's) looks far more like a form of the true *F. capreolata*; it is too incomplete for satisfactory determination. The two first-mentioned specimens I now refer to the *F. muralis* (Sond.) with some confidence; and if Mr. Hunt's broader-leaved plant is correctly joined to them, as was believed by Mr. Watson, we shall have arrived at the same result for the Azores that Mr. Lowe (Fl. Mad. 13) has done for Madeira, namely, that all the so-called *F. capreolata* of those islands is really the *F. muralis* of Sonder.

After reading Mr. Lowe's most valuable remarks (*l. c.*), I was led to re-examine my British specimens, in the hope of finding amongst them the *F. muralis*,—suspecting that my former *F. agraria*, which, in deference to the views of Dr. Walker-Arnott and Mr. Watson, I had ceased to regard as a species, might be rightly so named. Although the result is a little different from that expectation, all my supposed *F. agraria* proving to belong to the *F. confusa* (Jord.), nevertheless I find amongst plants received from Mr. Leighton examples of the *F. muralis*. This is the more interesting from Mr. Jordan's remark, made in the year 1848, concerning *F. muralis*. He said, "specimina hujus in Gallia lecta nondum vidi;" and as it is not noticed in the third edition of Boreau's valuable 'Flora of Central France,' nor in Lloyd's Flora of the West of that country, we may perhaps safely conclude that it has not even now been detected there. I possess an authentic specimen of *F. muralis* from Mr. Sonder himself, and another from the Island of Madeira, by which to determine the plant of Lowe. They accord very satisfactorily with each other and with the descriptions of the species as given by Sonder, Koch, A. Jordan, and Lowe.

These plants, together with *F. capreolata* (*F. speciosa*, Jord.), *F. pallidiflora* (Jord.), and *F. Boræi* (Jord.), combined with a few

others which inhabit the regions bordering on the Mediterranean Sea, constitute the Section *Capreolatæ* of Hammar, in his 'Monographia Generis Fumariarum,' for a copy of which I am indebted to my celebrated friend Fries.

This group of *Fumarias* has long been the subject of discussion amongst botanists, and it still remains difficult to ascertain the characters considered as distinctive by the describers of the species; for the descriptions are scattered through various books, some of which are rarely to be met with, and being drawn up by writers holding different views concerning the value of characters, are often not of easy comparison. As early as the year 1839 Dr. Walker-Arnott (Edinb. Bot. Soc. Rep. iii. 106) described as varieties of *F. capreolata*, under the names of α. *australis*, β. *Reichenbachii*, and γ. *Anglica*, three plants (preferring to consider them "as well-marked varieties to separating them as ill-defined species"), which I believe to be the *F. speciosa*, *F. pallidiflora* (including *F. Borœi*), and *F. muralis* (perhaps including *F. confusa*) respectively. As Dr. Walker-Arnott had not noticed what I consider as the real distinctive characters of these plants, he exercised a sound judgment in calling them only varieties; but I rather wonder that in his editions of the 'British Flora' he does not mention them—even as such. The possession of authentic specimens, received from Mr. Leighton, enables me to identify Dr. Walker-Arnott's plants, and to award to him the credit of being apparently the first botanist to notice them. In 1841 Mr. Leighton (Fl. Shrop. 344) carefully described two forms of the supposed *F. capreolata*, and adds, that that which he distinguishes from the type of the species "merits attention and further remark," which, however, he does not seem ever to have given to it. His supposed type of *F. capreolata* I believe to be the *F. muralis*, Sond., and his second form is the *F. Borœi* (Jord.) and the *F. capreolata* β. *Leightonii* of my 'Manual.' Mr. Sonder (Koch, Syn. ed. 2. 1017) described his *F. muralis* in 1844; Mr. Jordan his *F. confusa* in 1848 (Cat. Dij. 18), his *F. Borœi* in 1849 (Cat.Gren. 15), his *F. speciosa* in the same year (Cat. Gren. 15), and his *F. pallidiflora* (Schultz, Arch. 305) in 1854.

Before proceeding to define the characters of these plants, care must be taken that the species allied to *F. agraria* (Lag.) are separated from the true *Capreolatæ*. They all have very markedly tubercular-rugose fruit,—a rugosity very different from the slightly rough (dry) fruit of some of our plants. None of them have been found in Britain, the climate of which is too cold for them.

Those of the *Capreolatæ* which it is necessary to consider on this occasion are the following: *F. pallidiflora*, *F. Borœi*, and *F. confusa* of Jordan, and *F. muralis* of Sonder. All of these appear to inhabit Britain, and they are also found in the neighbouring parts of Europe. Their fruit is nearly, although not always, entirely smooth. It is chiefly when the fruit is quite dry that a slight roughness may be occasionally detected; but, as was remarked above, in no case do they acquire the tubercular-rugose coat of the plants grouped as the *Agrariæ*.

Mr. A. Jordan appears to have been the first to point out a most valuable character which distinguishes one of these species, the *F. confusa*, in a remarkable manner, and which is applicable also to the others, although less conspicuously. The base of the fruit is furnished with a fleshy mass by which it is attached to the pedicel. The size and relative proportion of this mass (which may be called the *base*) to the fruit itself, and to the enlarged tip of the pedicel, can only be seen when the fruit is fresh (although it may be restored tolerably completely by softening the specimens in boiling water), and has therefore been overlooked by botanists. In *F. confusa* this *base* is so large as to be very nearly as broad as the broadest part of the fruit, and exceeds in width the slightly enlarged tip of the pedicel. In *F. Borœi* it is very narrow and nearly as long as broad, forming a kind of stalk to the fruit. It is much narrower than the rather remarkably enlarged tip of the pedicel. In *F. pallidiflora* the tip of the pedicel is not much enlarged, and very slightly exceeds in width the base of the fruit, which seems to be rather broader, but at the same time rather shorter and less conspicuous than that of *F. Borœi*. In *F. muralis* the tip of the pedicel is enlarged and is rather thicker than the base of the fruit, which is not nearly so broad nor so conspicuous as that of *F. confusa*. It widens gradually upwards, so as to give to the whole fruit a pyriform shape when fresh,—the line of separation between the true carpel and the "base" being only faintly marked. In *F. confusa* the limits of these parts are clearly defined.

There is a character furnished by the little pits at the top of the fruit (one pit being placed upon each side of the base of the style) which is probably of value. They are not very conspicuous on the fresh fruit, but show themselves obviously after its outer coat has shrunk in drying. In *F. pallidiflora* and *F. Borœi* these pits are small, deep, and nearly round; in *F. confusa* they are broad and shallow; in *F. muralis* they are usually so very shallow as often to be scarcely visible.

The size of the fruit separates *F. muralis* from its allies: it is much smaller and also much rounder. The other species now under consideration have fruits all very nearly equal in size, although differing in form.

There is a curious spur attached to, and apparently forming a continuation backwards of, the agglutinated filaments of the upper cluster of stamens. It is directed backwards into the spur of the upper petal, and may possibly furnish characters by which to assist in distinguishing species. I believe that the credit of first calling attention to it belongs to Parlatore, who describes and figures it in his 'Monografia.' My acquaintance with it is very slight, my attention having only recently been directed to it. If we may judge from books, few botanists appear to know of its existence.

I have failed in detecting any constant characters in the leaves, the forms and sizes of which are very variable. Neither does the erect or rampant or prostrate state of the stem seem to be of much consequence. When writing about *F. confusa* (my *F. agraria*) in the 'Botanical Gazette,' I remarked that the stem was erect in the earlier, and procumbent in the later part of the summer. Such I suspect to be also the case in the other plants now under consideration.

The differences which are found in the forms and proportions of the sepals and of the bracts will be noticed under the several species, as will be also the colour of the corolla and the direction of the fruit-bearing pedicels.

The only British plant which can be confounded with these *Capreolatæ* is the diffuse state of *F. officinalis*. It is perhaps often called *F. capreolata* by careless observers; and its being distributed by them with that name has tended to confuse the ideas of better botanists who have only had the dried specimens before them. Amongst nearly allied and similar-looking plants, it is often better to append no name to a specimen than to risk the application of a wrong one. This rampant form of *F. officinalis* agrees in nearly all respects with the erect and typical form of that species. Its spikes of fruit are very long and lax; its fruits are obovate-retuse, with a very faintly marked base and decidedly rugose surface; its lower petal is spathulate, being linear with the exception of a round dilatation at the end. As far as I am able to ascertain, the spikes of all these *Capreolatæ* are always much shorter; their fruits are never retuse, have always a marked base, and a surface which is not rugose, although sometimes slightly rough when dry; their

lower petal is not spathulate, but widens gradually throughout its upper half.

Dr. Walker-Arnott has shown (Edinb. Bot. Soc. Rep. iii. 99) that the typical *F. capreolata* (Linn.) is the plant found at Montpellier (the *F. speciosa* of Jordan). It is exceedingly beautiful, and has larger flowers than those of *F. pallidiflora*. Its corolla is white, but tinged reddish on the back and with a brownish-black tip. The pedicels are turned downwards, "parallel to the peduncle, almost from their point of insertion, and this before the flowers have fallen off, so that the spur of the flower is superior, the apex pointing downwards," to adopt his accurate words. The fruit is much smaller than that of *F. pallidiflora*, and closely resembles in size and form that of *F. muralis*, except that it is *not* "equally rounded at the top as elsewhere," but is slightly truncate; the apical pits also are small but deep. It seems to be quite a distinct species from either of those described in this paper, and is chiefly found in the South of Europe. Linnæus adopted it primarily from Bauhin, and DeCandolle ascertained that the plant found at Montpellier is that of Bauhin. I have a specimen of the *F. capreolata* (*F. speciosa*, Jord.) gathered at DeCandolle's station by Sonder. Linnæus also quotes Ray's 'Historia' (405) to his plant, and therefore gives England as a locality for it; but Ray's plant is certainly not that of DeCandolle, which is apparently as certainly that of Linnæus, who does not seem to have known it practically, but adopted it from his predecessors.

Some excellent botanists will doubtless say that these plants are all forms of one variable species, and I suppose that no person is in a position to contradict them; for who knows what really constitutes a species amongst plants? It seems to me to be just as impossible to prove that the "aggregate species," as Mr. Watson terms them, are quite distinct from each other, as it is to show that the "segregate species" are so. The difference between my views and those of my eminent friends referred to above amounts only to this, that they think that by a study of the aggregate species they best advance our knowledge of the vegetable creation, whilst I consider a discrimination of the segregate species to tend at least as greatly to that end. The search after truth is our common object, and, although we may be far from having yet attained to it, we all confidently hope that our accurate and honest endeavours will assist our successors in its discovery.

1. F. PALLIDIFLORA (*Jord.*): sepalis ovatis dentatis corollam dimidiam longitudine fere æquantibus ejusque tubum latitudine superan-

tibus, *fructibus* subgloboso-compressis obtusis *longioribus quam latis* lævibus, *basi fructus brevi pedicelli apice angustiore*, bracteis *pedicellos* floriferos excedentibus *fructiferis reflexis* paulo brevioribus, racemis evolutis laxis brevibus paucifloris.

F. pallidiflora, *Jord. in Schultz, Arch.* 305; *Bor. Fl. du Centre de la Fr.* ed. 3. ii. 34.

F. capreolata, *Hamm. Mon. Fum.* 24. t. 3 (excl. var. *a* et *β*).

Sepals soon falling, usually entire towards the point, as broad as or broader than the cor.-tube. Cor. large, cream-coloured, tipped with red or pink; tube thick; lower petal linear, green, boat-shaped, gradually dilated towards the end, its sides inflexed; lateral petals linear, truncate-apiculate, with a narrow keel. Fruit with a short and rather narrow base which is very nearly as broad as the thickened tip of the pedicel; edge not regularly rounded, but the whole vertical outline rather quadrangular; apical pits small and deep. Fruit-stalks usually curved back, but sometimes only patent or divaricate.

The *F. capreolata β. Reichenbachii* of Arnott (Rep. Edinb. Bot. Soc. iii. 106) includes this plant and *F. Boræi*, as I learn from specimens named by Dr. Arnott for Mr. Leighton.

The fruit of my plant is always longer than broad, and its base has little of the stalk-like character of that of its nearest ally, *F. Boræi*, from which also its paler flowers and recurved fruit-stalks seem to distinguish it.

As the typical *F. capreolata* (Linn.) is the *F. speciosa* (Jord.), that name must disappear from our flora.

I have seen specimens of this plant from Salcombe and Ilfracombe, Devon; Watchet, Somerset (Rev. W. W. Newbould); Oystermouth near Swansea, Glamorgan; Caernarvon; Oswestry, Shropshire.

2. F. Boræi (*Jord.*): sepalis late ovatis dentatis tubi corollæ latitudine latioribus eodemque ¼ brevioribus, *fructibus* subgloboso-compressis *truncatis latioribus quam longis* demum paulisper rugulosis, *basi fructus angusta pedicellique apicem haud superante*, bracteis sæpe pedicellos floriferos paulo excedentibus *fructiferis patentibus* brevioribus, racemis evolutis laxis brevibus paucifloris.

F. Boræi, *Jord.*! "*Cat. Grenob.* 1849, 15;" *Pugil.* 4. *Lloyd, Fl. Ouest France*, 24. *Bor. Fl. Cent. France*, ed. 3. ii. 34. *Billot, Exsic.* No. 2209.

F. capreolata, *Curt. Fl. Lond.* ii. 145 (fasc. vi. 47); *Koch in Sturm, Deutschl. Fl.* 62. 13.

F. capreolata *β.* Leightonii, *Bab.*! *Man.* ed. 4. 17.

F. capreolata (second form), *Leight.*! *Fl. Shrop.* 345.

F. media *a.* typica, *Hamm.* 28. t. 3.
F. muralis, *Bor. Fl. Cent. Fr.* ed. 2, not *Sond.*

Sep. soon falling, attached above their base, deeply toothed at the base, often toothed throughout. Cor. rather large, pale, often purplish, with a dark purple tip; pet. gradually narrowed to an acute point at the tip; lower petal often free and either patent or declining. Fruit with a narrow base, which is usually, perhaps always, much narrower than the enlarged tip of the pedicel. The vertical outline is rather quadrangular with the sides rounded and top truncate; apical pits small and deep. Fruit-stalks patent, straight, or rarely slightly deflexed.

This is probably the *F. capreolata* of Smith, under which name Mr. A. Jordan received it from Sir W. J. Hooker (Archiv, 305). It is certainly the *F. capreolata* of Curtis's beautiful plate in the 'Flora Londinensis.' Sowerby's plate in 'English Botany' is probably taken from a specimen of *F. Boræi*, but may contain some traces of *F. muralis*. A minute examination shows that the drawing is not trustworthy.

The specimen from Winandermere, with long bracts, referred to *F. capreolata* in my paper published in the first volume of the Edinburgh Botanic Society's Transactions, is a state of *F. Boræi*.

Lloyd (Fl. Ouest) describes the fruit of his *F. Boræi* as "un peu plus long que large." It seems therefore probable that he may include the *F. pallidiflora* under that name. The fruit of my plant seems to be always rather broader than long, and is remarkable for the squareness of its vertical outline and the stalk-like appearance of its base: approaching in form to that of *F. officinalis*; but it is not so short relatively to its breadth, nor retuse. Its racemes are few-flowered and short, thus differing greatly from the long and many-flowered ones of *F. officinalis*.

F. Boræi is perhaps too nearly allied to *F. pallidiflora*; at least such seems to be the case when dried specimens are examined. Its leaflets appear to be narrower relatively to their breadth. The corolla is always much tinged with pink, which is rarely the case with those of its ally. Its sepals are usually more toothed, and are generally larger. Its fruit is different in shape; the base is broader, but still not so broad as the tip of the pedicel, although that part is less enlarged than in *F. pallidiflora*.

I have seen *F. Boræi* from Tenby, Pembrokeshire; Shrewsbury; Windermere, Lancashire; Glenmore near Lisburn, co. Antrim (Dr. J. H. Davies).

3. F. CONFUSA (*Jord.*): sepalis ovatis apiculatis dentatis tubi corollæ latitudinem æquantibus eodemque $\frac{2}{3}$ brevioribus, fructibus subgloboso-compressis apice rotundatis demum paulisper rugulosis, *basi fructus latissima pedicelli apice conspicue latiore*, bracteis pedicellos floriferos æquantibus *fructiferis patentibus* duplo brevioribus, racemis evolutis laxis brevibus paucifloris.

F. confusa, *Jord. Cat. Dij.* 1848, 18; *Lloyd, Fl. Ouest Fr.* 24.

F. Bastardi, *Bor.* "*in Rev. Bot.* ii. 359"; *Fl. Cent. Fr.* ed. 3. ii. 34.

F. agraria, *Mitt.*! *in Lond. Journ. Bot.* vii. 556; *Bab.*! *in Bot. Gaz.* i. 62 (not *Lag.*).

F. capreolata, *Bab.*! *Prim. Fl. Sarn.* 4.

F. capreolata γ. media, *Bab.*! *Man.* ed. 4. 17.

F. media β. confusa, *Hamm.* 28. t. 3.

Sep. often persistent with the young fruit. Cor. rather large, but less than that of *F. pallidiflora*, dingy white or pinkish; tip and sometimes the back dark purple; tube rather thick; lower petal linear, flattened, blunt, keeled and brownish, and with inflexed sides towards the tip; lateral petals linear, truncate-apiculate, broadly but shortly boat-shaped, winged on the back. Young fruit rather obovate-acuminate. The fleshy base is nearly as broad as the fruit, and wider than the much-enlarged tip of the pedicel: it is scarcely narrower at its base than where it joins the fruit. The vertical edge of the fruit is regularly rounded, and the whole outline, above the enlarged base, is nearly round; apical pits broad but shallow.

If attention be paid to the shape of the fruit, and especially to its remarkable base, there cannot be any difficulty in distinguishing this plant from *F. pallidiflora* and *F. Borœi*; neither does it seem probable that any botanist who examines them when fresh will have doubts about the specific distinctness of this plant from its allies.

Had I possessed the acuteness of observation which belongs to Mr. Jordan, I should not have been misled into reducing this plant to a form of *F. capreolata*, after having recorded it as a species, although with an erroneous name. The effect of my so acting has been what is usual in such cases, viz. that the plant has suffered total neglect in this country. There seems to be no surer mode of diverting attention from a plant than that of placing it as a variety of some species supposed to be well known.

I have seen specimens of this plant from Jersey and Guernsey; Zennor and Trevenna, Cornwall; Ilfracombe, Devon; Tenby, Pembrokeshire; Aberystwith, Cardiganshire; Bangor, Caernarvonshire; Hawkhead, Lancashire; and Dublin.

4. F. MURALIS (*Sond.*): sepalis ovatis acutis basi dentatis tubi corollæ latitudinem subæquantibus eodemque ⅔ brevioribus, fructibus obovato-compressis apice rotundatis parvis sublævibus, *basi fructus lata obconica pedicelli apice paulo angustiore*, bracteis pedicellos floriferos æquantibus *fructiferis erecto-patentibus* brevioribus, racemis evolutis laxis brevibus paucifloris.

F. muralis, *Sond.*! *in Koch, Syn.* ed. 2. 1017; *Fl. Hamb.* 385. *Jord. Cat. Dij.* 1848, 19. *Lowe*! *Fl. Madeira*, 13. *Fries, Summa*, 146; *Fl. Dan.* t. 2473.

F. Petteri, *Koch, Syn.* ed. 2. 435 (not *Reichenb.*).

F. capreolata var. media, *Fries, Mant.* iii. 88.

F. capreolata (type), *Leight.*! *Fl. Shrop.* 344.

F. media γ. muralis, *Hamm.* 29. t. 4.

Plant usually more lax than its allies. Corolla smaller than that of *F. confusa*, tipped "dark atro-purpureous or black." Petals abruptly apiculate. The fleshy base is not nearly so broad as the fruit, and narrows very conspicuously from above downwards to the pedicel, the tip of which slightly exceeds it in width. The fruit, together with its base, has thus, when fresh, an obovate or nearly pyriform outline; it is equally rounded at the top as elsewhere, and neither pointed nor retuse, as is well remarked by Mr. Lowe; the apical pits are usually so very slightly impressed as almost to escape notice. The bracts are often not more than half as long as the fruit-stalks.

Fries seems to include under his *F. muralis* the plant of Sonder and also the *F. confusa* of Jordan; for he states (Mant. iii. 88) that it is the *F. capreolata* of Eng. Bot. (t. 943), and says of it, "Galliæ occidentali, Britanniæ præcipue boreali et Norwegiæ extimis oris propria videtur." The plant of Western France is certainly the *F. confusa*. What the Norwegian plant may be is unknown to me, for I have not seen a specimen; but as it is found "Norwegiæ maxime occidentalis," it may well be the true plant.

This is probably the type of the *F. capreolata* γ. *Anglica* (Arn.), which is considered as the true *F. capreolata* by Leighton. A considerable series of Leighton's specimens is before me, some of which were named (γ. *Anglica*) by Arnott. But, apparently, Arnott included the *F. confusa*, and perhaps *F. Boræi*, in that variety. Leighton seems to have inclined towards the opinion that his two forms of *F. capreolata* were distinct species, as is the fact. To him therefore is due the credit of first discriminating between *F. Boræi* and *F. muralis* in this country, although he refrained from naming the new species, and was unacquainted

with the most valuable characters by which they are distinguished from each other and from their allies.

I have seen *F. muralis* from Barnes, Surrey (Mr. Pamplin); Shrewsbury, Salop; Wrexham, Denbighshire (J. E. Bowman); Sheffield (Rev. W. W. Newbould).

Having now characterized all our species belonging to the group called *Capreolatæ*, it may be well to add a similar notice of the true *F. capreolata* (Linn.), derived from specimens received from several parts of the South of Europe, and especially from some gathered by Mr. Sonder at Montpellier, in the place pointed out by DeCandolle.

F. CAPREOLATA (*Linn.*): sepalis ovatis basi dentatis tubi corollæ latitudine latioribus eodemque duplo brevioribus, *fructibus obovato*-compressis obtusis parvis longioribus quam latis lævibus, basi fructus lata obconica pedicelli apicem æquante, bracteis *pedicellis floriferis et fructiferis reflexis* brevioribus, racemis evolutis laxis brevibus pauci-floris.

F. capreolata, *Linn. Sp. Pl.* 985. *DeCand. Syst.* ii. 133; *Fl. Fr.* iv. 639; *Prod.* i. 130.

F. speciosa, *Jord.* "*Cat. Gren.* 1849, 15;" *in Schultz, Arch.* 199; *in Walp. Ann. Bot.* ii. 28. *Lloyd, Fl. Ouest*, 24. *Bor. Fl. Cent.* ii. 34.

Sepals persistent, often even found with the fruit, usually entire in their upper half. Cor. very large, white, tipped with brown-black. Fruit half as large as that of *F. pallidiflora*. Base of the fruit not nearly so broad as the fruit and narrowing downwards to its point of attachment. The whole fresh fruit is rather pyriform, quite smooth; its apical pits conspicuous.

On *Combretum butyrosum*, a new kind of Butter-tree from South-eastern Africa. By T. CARUEL of Florence. Communicated by J. D. HOOKER, M.D., F.R.S. & L.S.

[Read Nov. 17th, 1859.]

SEVERAL years ago Professor Joseph Bertoloni published an account of a kind of vegetable butter, which he had received from South-eastern Africa together with dried specimens of the tree that produced it. This tree Professor Bertoloni considered as belonging to a new genus, which he consequently described under the name of *Sheadendron*, and called the plant *S. butyrosum*, from an idea that it was the same as the celebrated Shea-tree mentioned by Mungo Park. According to him, the *Sheadendron* could