

mandibles ferruginous; ocelli not apparent; eyes round, the facets of a crystalline brilliancy. Thorax compressed, metathorax very oblique, smooth and shining, the scale small, elongate, inclining forwards, almost decumbent; legs dark rufo-testaceous, the joints and tarsi pale testaceous; abdomen sub-ovate, produced anteriorly, overhanging and concealing the scale.

Male.—Length 2 lines. Black, the antennæ elongate, reaching to the apical margin of the first segment of the abdomen, the first joint of the flagellum scarcely thicker than the second, all the joints of about equal length, the second and third a little longer than the basal joint; the ocelli prominent, of a glassy brightness, the clypeus convex, the mandibles produced, very stout, the inner margins straight and serrated, their apex terminated by an acute stout incurved tooth. Thorax elongate, rounded anteriorly, smooth and shining, the metathorax rounded posteriorly, sub-opaque, and having a depression or fossulet in the middle above; legs dark rufo-testaceous, the joints and tarsi pale testaceous; wings fusco-hyaline, nervures and stigma fusco-testaceous; scale of the abdomen decumbent, incrassate, rounded at its superior margin, not concealed as in the worker; abdomen elongate-ovate, margins of the segments narrowly and obscurely testaceous.

The insect which I have described as the male I think must be correctly assimilated. The worker and male were both captured by J. C. Dale, Esq., in 1846; the workers in Scotland, the male at Bournemouth. This is a very interesting addition to our Fauna, quite a new form, approaching somewhat to that of *Ponera*, through which we pass to the division which have two nodes to the abdomen, constituting the family *Formicidæ*; the habit of *F. collina* also approaches to that of our British representative of the group *Poneridæ*—*P. contracta*—which is found usually under stones, in which situation Mr. Dale informs me he met with the present species. I have only seen two workers and one male, all captured by and in the collection of Mr. Dale.

Tapinoma polita, n. s.

Operaria.—Rufo-testacea, antennis filiformibus; lævis, tota nitidissima, nuda; antennis, mandibulis, pedum articulis et tarsis pallide testaceis.

Worker.—Rufo-testaceous, smooth and shining; head elongate, the sides slightly curved or rounded, having a few scattered long hairs, slightly emarginate behind; the scape as long as the head,

and of about the same length as the flagellum, the latter nearly filiform, the two apical joints being only slightly thickened. Thorax: smooth and shining, rounded anteriorly, slightly narrowed posteriorly, and strangulated at the junction of the meso- and metathorax, the latter emarginate behind, the emargination extending the entire width, the lateral angles obtuse; the scale of the abdomen decumbent, elongate, slightly narrowed at the base and rounded above. Abdomen ovate, smooth and shining, sprinkled with a few long pale hairs.

The only species which approaches this insect is the *Tapinoma nitens* of Mayr; but that has the scape shorter than the flagellum, and the latter is sub-clavate, the scale is much wider above, and the abdomen dark rufo-fuscous. I have only seen the single example described; it is in the collection of J. C. Dale, Esq., who captured it in Wales.

Fam. 1. PONERIDÆ, Smith.

Genus PONERA, Latr.

Head elongate, flagellum of the antennæ clavate in the females and workers, filiform in the males; inserted before the middle of the face: the maxillary palpi short, subsetaceous, 6-jointed, the labial palpi 4-jointed; the clypeus short, transverse; the ocelli and eyes obsolete in the workers; wings having one marginal, two sub-marginal and two discoidal cells; the abdominal scale sub-nodiform, incrassate; the margins of the second and third segments constricted.

Sp. 1. *Ponera contracta.*

Fœmina.—Elongata, sub-cylindrica, fusca; mandibulis, clypeo, antennis pedibusque pallide rufis; oculis magnis, subovalibus, hirtulis; ocellis distinctis; capite magno, confertim punctulato, sub-opaco; alis hyalinis, nervis subflavescentibus: squama altissima, crassa, antice convexa, postice lævissima concaviuscula; abdomine elongato-ovali, margine parum fusco-testacea.

Operaria.—Fusco-brunnea, sub-nitida, pube cinerascenti subdepressa, pilis sparsis erectis; oculis obsoletis, ocellis nullis.

Mas.—Niger, nitidissimus, pube sericea; pedibus fuscis, tibiis tarsisque rufescentibus; antennis elongatis, scapo minimo, pedicello subgloboso, reliquis articulis cylindricis; oculis valde prominulis, ocellis sat magnis; abdominis segmento primo squama crassa, antice posticeque subconvexa; segmento ultimo processu spiniformi deorsum flexo; alis ut in fœmina.

Formica contracta, Latr. Hist. Nat. Fourm., 195, tab. 7, fig. 40, ♀; Fabr. Syst. Piez., p. 410, 58.

Ponera contracta, Latr. Gen. Crust. et Ins., iv. p. 128; St. Farg. Hym., i. 195, 8; Steph. Illus. Brit. Ent. Supp., p. 15, tab. 42, fig. 2; Foerster, Hym. Stud. Form., p. 45.

Female.—Length $1\frac{3}{8}$ lin. Elongate, subcylindrical, shining rufo-fuscous; the antennæ, clypeus and mandibles rufo-testaceous; the eyes large and ovate, situated anteriorly at the sides of the head, opposite the insertion of the antennæ, which approximate at their base; the ocelli placed in a triangle on the vertex; a longitudinal impressed line extends from the anterior stemma to the base of the antennæ; the vertex slightly emarginate its entire width. Thorax elongate, the sides nearly parallel, rounded anteriorly; the metathorax sub-truncate, very slightly oblique; the scutellum, post-scutellum and legs, rufo-testaceous, the tarsi palest; wings having one elongate marginal cell, two elongate submarginal, and one discoidal cell. Abdomen, the node incrassate, vertical, rising above the base of the following segment, rounded above; the margins of the second and third segments constricted; the extreme apex pale rufo-testaceous.

Worker.—Black, or dark fuscous; elongate and sub-cylindrical; smooth and shining; head elongate, wider than the thorax, very finely and closely punctured; eyes and ocelli wanting; the face below the insertion of the antennæ, the latter, as well as the legs and extreme apex of the abdomen, rufo-testaceous; the mandibles large and triangular, their inner edge very finely denticulate; the flagellum clavate; the prothorax convex, rounded anteriorly, behind which the thorax is compressed; the metathorax slightly oblique: scale of the abdomen thickened, broad, and rounded above; the margins of the two following segments constricted, the first most strongly so; the margins obscurely rufo-testaceous; the apex pale rufo-testaceous.

This insect was discovered to be indigenous by Mr. J. O. Westwood, who captured it in St. James's Park.

I only possess the worker and female; the diagnosis of the male is from a foreign specimen. *P. contracta* is rare in this country; its communities being small and their living under stones and other substances, as well as their minute size, combine to render their detection difficult. I have never seen the insect alive.

Fam. 2. MYRMICIDÆ, Smith.

Genus MYRMICA, Latr.

Manica, Jurine.

This genus of ants is separated from *Formica* by very essential characters, which consist of the following differences: the abdomen has its two basal segments contracted into two nodes, the females and workers are armed with stings, and the pupæ are not enclosed in cocoons, but cast off a thin pellicle, like the pupæ of many Fossorial *Hymenoptera*; their labial palpi are 4-jointed, their maxillary palpi 6-jointed.

The males and females winged, the latter temporarily so. The males and females furnished with ocelli, which are wanting in the workers.*

Sp. 1. *Myrmica scabrinodis*.

Fœmina.—Rufo-testacea, sparse flavido-pilosula; capite supra, scutello abdominisque dorso medio fuscescentibus; scapo ad basin arcuatim flexo; capite, thorace et petiolo longitudinaliter striatis, profunde rugosis; metathorace spinis longiusculis; alis hyalinis, versus basin parum infuscatis, stigmatibus ejusdem coloris distincto.

Operaria.—Rufo-testacea, sparse flavido-pilosula, capite supra, abdominisque dorso medio fuscescentibus; capite, thorace et petiolo longitudinaliter striatis, profunde rugosis; antennarum scapo ad basin arcuatim flexo, flexura supra angulata; metathoracis spinis longis.

Mas.—Nigro-fuscus, nitidus, sparse tenuiter flavido-pilosulus; mandibulis, pedum articulationibus tarsisque testaceo-pallescentibus; antennis fusco-rufescentibus; scapo longitudine quintæ partis totius antennæ; abdominis apice pallide rufescentibus.

Myrmica scabrinodis, Nyland. Adno. Mon. Form., p. 930, 3, ♂, ♀, ♂; Foerster, Hym. Stud. Form., 66, 36.

Myrmica rubra, Curtis, Trans. Linn. Soc., xxi. 213, 1.—

Myrmica cæspitum, Zett. Ins. Lapp., 450, 1 ♂.

Female.—Length $2\frac{1}{2}$ lines. The head above and the clypeus fuscous; beneath, the sides, the face on each side of the clypeus,

* None of the British species of the genus *Myrmica* spin a cocoon, and this appears to be the case with the majority of the *Myrmicidæ*; but the genus *Myrmecia*, Fabr., is an exception to the rule. I possess the pupa, and silken cocoon from which it was extracted, of a species closely allied to *M. gulosa*, from New Holland.

the mandibles, and the antennæ, rufo-testaceous; the scape stout, of nearly equal thickness the entire length, and bent at the base, the curvature produced in front into a sharp angle; the head and thorax above, rugose-striate; the spines which arm the metathorax long, stout, and acute at their apex; the nodes of the abdomen coarsely rugose; the wings hyaline, faintly coloured towards their base; the nervures and base of the stigma rufo-testaceous. Abdomen subovate, smooth and shining, dark fusco-ferruginous, the base and apex pale ferruginous, thinly sprinkled over with shining yellow hairs.

Worker.—Length $1\frac{1}{2}$ —2 lines. The sculpture as in the female; the ocelli obsolete, the general colouring usually paler, particularly the head and thorax; the head perhaps scarcely so deeply striated; the scape is bent and angulated in the same manner as in the female; the thorax is more compressed at the sides, being narrower towards the metathorax than in the female; the nodes as in that sex, the legs rather more slender; the abdomen proportionably smaller.

Male.—Deep nigro-fuscous; the apical joints of the flagellum, the tubercle at base of the scape, the mandibles, the apex of the femora and the tarsi, pale rufo-testaceous; the mandibles usually pale yellow; the scape short and stout, about one-fifth of the entire length of the antennæ; the antennæ and legs thinly sprinkled with pale glittering hairs; the wings smoky towards their base. Abdomen smooth and shining, pale testaceous at the apex, the nodes shining above, the anterior one has a shining depression behind; the metathorax is deeply notched and produced into an angulated process on each side, the scutellum and sides of the metathorax striated; the entire insect sprinkled with pale glittering hairs.

This is a very abundant species: it is found in all parts of the kingdom, and is frequently met with, occupying one side of the same hillock in which *Formica flava* has formed its habitation; it is met with in great profusion in hilly districts, forming its subterranean channels under stones; in the nest of this insect I met with a specimen of *Batrisus formicarius*, in Yorkshire.

Sp. 2. *Myrmica ruginodia*.

Fœmina.—Testaceo-ferruginea, sparse flavido-pilosa, capite supra, abdominis dorso medio, scutello et macula ventrali plus minusve fuscescentibus; scapo ad basin arcuatim flexo; capite, thoraceque longitudinaliter striatim-rugosis; metathoracis spinis

longiusculis ; alis hyalinis, nervis cum stigmate sub-flavescentibus ; nodis petioli rugosis.

Operaria.—Testaceo-ferruginea, sparse flavido-pilosula ; capite supra abdominisque dorso medio et macula ventrali plus minusve fuscescentibus ; scapo basin versus arcuatim flexo ; capite thoraceque longitudinaliter striatim-rugosis ; metathoracis spinis binis validiusculis longis ; nodis petioli rugosis.

Mas.—Nigro-fuscus, nitidus, parcissime tenuiter flavido-pilosulus ; mandibulis, articulationibus pedum et tarsis testaceo-pallescentibus ; scapo elongato, fuscescente, abdomine supra obscure rufescente.

Myrmica ruginodis, Nyland. Adno. Mon. Form., 929, 2 ; Foerster, Hym. Stud. Form., p. 66, 36.

Myrmica vagans, Curtis, Trans. Linn. Soc., xxi. 213, 3.

Female.—Length $2\frac{1}{2}$ lines. This sex so very closely resembles that of the preceding, that it is only necessary to point out the distinctions of the present species. The scape is more slender, gradually narrowing to the base, which is bent, but not angulated in front of the arcuation ; the flagellum is also more slender, and the joints rather longer ; the mesothorax is not so deeply rugose-striate, and the thoracic spines are not quite so stout and are more bent inwards towards each other.

Worker.—Differs from that of the preceding species in the same characteristics as the female.

Male.—At once distinguished from that of the preceding species by having the antennæ rather longer than the thorax, the scape being about one-third of their entire length ; they are usually also paler coloured, and the entire insect is less pilose, particularly the head and legs ; the tarsi are more elongate and slender ; the metathorax is less deeply notched, and sub-angulated laterally.

This is in all probability the species described by Linnæus as *Formica rubra*, since it usually possesses the character pointed out by the author, "punctum nigrum sub abdomine ;" but, as I have observed this character in some examples of other species, I have not thought myself warranted in changing the name : the species is equally abundant with the foregoing, and found in similar situations.

Mr. Curtis quotes this species as being the *Formica vagans* of Fabricius, but the description of that author would equally well

suit either this, the preceding, or following species; therefore until the typical specimen can be examined I retain Nylander's name for the species.

Sp. 3. *Myrmica lævinodis*.

Fœmina.—Sordide testaceo-ferruginea, sparse flavido-pilosula; capite, pronoto, scutello abdomineque supra et infra in medio fusciscentibus; capite thoraceque longitudinaliter striatim-rugulosis; metathorace spinis brevibus validiusculis: nodis petioli sublævibus; alis hyalinis.

Operaria.—Testaceo-ferruginea, sparse flavido-pilosula, capite supra abdominisque dorso medio et macula ventrali plus minusve fusciscentibus; capite et thorace longitudinaliter striatim-rugulosis; metathorace spinis binis validiusculis; nodis petioli sublævibus.

Mas.—Nigro-fuscus nitidus, sparse flavido-pilosulus; mandibulis tarsisque pallide testaceis; antennis scapo valde elongato, metathorace inermi, tuberculis utrinque sub-obsoletis; antennis, trochanteribus, tibiis abdomineque plus minusve conspicue fusco-pallescentibus; alis hyalinis, basin versus obsoletissime subfusciscentibus.

Myrmica lævinodis, Nyland. Adno. Mon. Form., p. 927, 1; Foerster, Hym. Stud. Form., 46, 35; Curtis, Trans. Lin. Soc., xxi. 213, 2.

Female.—Length $2\frac{1}{2}$ lines. Fusco-testaceous: the head dark fuscous, the mandibles and antennæ pale testaceous, the apical joints more or less ferruginous; the thorax above usually rufo-testaceous, sometimes only the scutellum; the metathoracic spines short, stout and acute, slightly divergent; wings hyaline, the nervures pale rufo-testaceous, the stigma slightly fuscous; the anterior node smooth and shining above, posteriorly, as well as the second node, obsoletely roughened. Abdomen smooth and shining, more or less fuscous above, and having sometimes a fuscous spot beneath; the scape of the antennæ attenuated at the base, and slightly bent.

Worker.—Differs very slightly in any respect from the female, except in being smaller: the mandibles are ferruginous, and the nodes of the abdomen faintly rugose.

Male.—Length 2 lines. Dark fuscous, the head less shining than the thorax and abdomen, and obsoletely rugose; the man-

dibles pale testaceous; antennæ rufo-testaceous, the scape above, and the three apical joints of the flagellum, slightly fuscous; ocelli of a glassy brightness, very prominent, as well as the eyes; thorax: the mesothorax very prominent, anteriorly smooth and shining, as well as the metathorax posteriorly, which is slightly notched and laterally sub-angulated; wings hyaline, nervures pale testaceous, the stigma slightly fuscous; the nodes and the abdomen very glossy, the apex of the latter pale testaceous; the articulations of the legs and the tarsi pale testaceous.

This species most closely approaches *M. ruginodis*; the female of the present species, however, may be distinguished by having the spines of the thorax smaller, being short angular processes, very acute at their apex, not bent spines, as in *M. ruginodis*; the smooth nodes will also serve to distinguish it. The worker has the spines longer than the female; the thorax is not so coarsely sculptured as in *M. ruginodis*, and the nodes are smooth and shining, the sculpture on them being very delicate. The male has the antennæ shorter than in *M. ruginodis*, and intermediate, as it were, between *M. ruginodis* and *M. scabrinodis*; the scape is about one-third of the entire length.

This species does not appear to be so abundant as either of the foregoing; I have only met with it in Sandown Bay, and in Luccomb Chine, Isle of Wight; Mr. Baly found it at Folkestone; I suspect it is a local species in this country.

Sp. 4. *Myrmica sulcinodis*.

Fœmina.—Ferruginea, sparse flavido-pilosula, capite et abdomine fusco-nigrescentibus; mandibulis, antennis, thorace pedibusque pallido-ferrugineis; capite, thorace et petiolo longitudinaliter striatis, profunde exaratis; antennarum scapo ad basin parum subcurvato; metathoracis spinis longis.

Operaria.—Sordide rubida, sparse flavo-pilosula, capite abdomineque fusco-nigrescentibus; mandibulis antennisque pallide rufescentibus; capite, thorace et petiolo longitudinaliter striatis, profunde exaratis; antennarum scapo ad basin parum curvato: metathorace spinis longis.

Mas.—Nigro-fuscus, nitidus, parcissime tenuiter flavido-pilosulus; mandibulis, antennarum flagellis, articulationibus pedum tarsisque pallide rufo-testaceis; alis hyalinis, nervis pallide testaceis; capite, metathorace supra, nodis segmenti primi longitudinaliter striatim-rugulosis.

Myrmica sulcinodis, Nyland. Adno. Mon. Form., p. 934, 5.

Myrmica perelegans, Curtis, Trans. Linn. Soc., xxi. 214, 5,
tab. 4, fig. 15 ♂, 16 ♀, 17 ♂.

Female.—Length $2\frac{1}{2}$ lines. Head and abdomen very dark rufo-fuscous: sometimes the latter is nearly black; the scape usually rather darker than the flagellum and slightly fuscous above, but at other times the antennæ are entirely rufo-testaceous; the legs also differ in being sometimes entirely pale-red, sometimes only the tarsi are pale, according to the maturity of the insect; the head is longitudinally roughly rugose; the thorax and nodes of the abdomen longitudinally rugose-sulcate: the spines of the metathorax elongate, acute, and curving slightly inwards; the scape is slightly curved at the base; the wings clear hyaline, the nervures and stigma pale testaceous; abdomen very glossy and sprinkled with pale glittering yellow hairs.

Worker.—Length 2 lines. Differs from the female scarcely in anything except size; the spines are however more erect, and the workers are usually darker in colour.

Male.—Length $2\frac{1}{2}$ lines. Dark fuscous, sometimes nearly black, the head longitudinally roughly rugose; the mandibles, flagellum, and apex of the scape, pale rufo-testaceous, the latter frequently fuscous above at the base, sometimes only slightly so; thorax above longitudinally sulcate, most deeply so on the metathorax above and at the sides; the metathorax sub-marginate behind, the posterior truncation smooth and shining; the joints of the legs, as well as the tarsi, pale rufo-testaceous; the wings of a pale yellow hyaline; the nervures and stigma pale testaceous; the apex of the nodes and of the abdomen pale rufo-testaceous.

This distinct species appears to be very local; I have never met with it. Mr. Dale has captured the male and worker in Wales, and I am indebted to Mr. Curtis for examples of the sexes taken at Bournemouth, Hampshire: the male is here described for the first time. Possessing several specimens of Nylander's species, presented by himself, and also others from M. Mayr, of Vienna, I have been unable to recognise the slightest difference between these and specimens presented by Mr. Curtis.

Sp. 5. *Myrmica denticornis*.

Fœmina.—Testaceo-ferruginea, sparse flavido-pilosula; capite supra abdominisque dorso medio fuscescentibus; mandibulis et pedibus flavido-testaceis; alis hyalinis, nervis testaceis, capite

striatim rugosis; thorace et petiolo longitudinaliter striatis, profunde rugosis; antennarum scapo ad basin geniculatim flexo, geniculo supra acute denticulato.

Operaria.—Obscure rubida, sparse flavido-pilosula; cætera ut in præcedente.

Mas.—Fusco-pallidus, mandibulis pallide rufescentibus, thorace et petiolo sublævibus; alis sub-hyalinis, nervis et stigmatè pallide fulvis.

Myrmica denticornis, Curtis, Trans. Linn. Soc., xxi. 215, 7, tab. 23, fig. 18, 19, ♂, ♀.

Female.—Head above, mesothorax, scutellum and abdomen, fusco-ferruginous; the metathorax and antennæ pale ferruginous; the scape, mandibles and legs pale rufo-testaceous; the mesothorax has on each side a longitudinal fuscous stripe uniting with a transverse one at the base of the scutellum; the scape is geniculated at the base, having at the upper angle an acute short tooth; the spines on the metathorax slightly divergent and curved slightly inwards, they are stout, long and acute.

Worker.—This strongly resembles the female in its sculpture, but is of an uniform dark fuscous red; the antennæ, mandibles and legs fulvous; the antennæ denticulate as in the female: in both sexes the first node of the petiole is ovate, the second globose, both being coarsely rugose.

Male.—Length $2\frac{1}{2}$ lines. Pale dull castaneous, sparingly pubescent, the head irregularly and indistinctly striated; mandibles straw-coloured; the antennæ and legs fulvous; coxæ, tips of the femora and the tarsi pale testaceous; the margin of the scutellum and the articulations of the nodes of the abdomen pale testaceous; the basal node a little elongated and irregularly striate, the second node as well as the disk of the thorax smooth and shining, the latter faintly sculptured; the spines on the metathorax are short and acute, slightly divergent; wings slightly tinted, the nervures and stigma pale fulvous.

Mr. Curtis has described the worker and male of this very distinct species; the female I describe from the collection of J. C. Dale, Esq., who captured it as well as the worker in Scotland; it is most closely allied to the *M. lobicornis* of Nylander, but on comparison with specimens of that insect presented to me by that author, it is immediately seen to be abundantly distinct.

Mr. Curtis captured this insect in Scotland in July, 1825, but did not find any females.

Sp. 6. *Myrmica longiscapa*.

Myrmica longiscapus, Curtis, Trans. Linn. Soc., xxi. 213, 4.

Mr. Curtis says, "this species resembles *M. lævinodis*, but the males are much smaller, the antennæ much longer, and instead of the scape being only as long as the two basal joints of the flagellum, as in *M. lævinodis* and *M. rubra*, it is equal in length to the eight following joints. The head is less convex, there is no channel down the forehead, and the clypeus is testaceous: there is a fovea on the hinder margin of the second nodule; the wings do not differ; the females are very similar to those of *M. lævinodis*, but they are darker, and the basal nodule is shorter and stouter. The neuters are smaller and different in colour from those of *M. lævinodis*, being entirely ochreous, excepting the black eyes and a brownish cloud on the back of the abdomen."

I do not possess this species, which must approach very closely to *M. lævinodis*; the figure of the nodes of the abdomen of the female, in profile, appear to characterize a distinct species; the characters of the male, however, are those of *M. lævinodis*, respecting which there is evidently, in the above quotation, some misconception; in my typical specimens, named by Dr. Nylander, the scape is equal in length to 7 or 8 of the basal joints of the flagellum, and Nylander's description is, "scapus tertiam partem totius antennæ fere excedens, longitudine prope articularum 7 sequenti flagelli." Nylander does not mention the fovea on the second nodule, but it exists in all his specimens—the females and workers of *M. lævinodis* are both characterized by the fuscous cloud on the back of the abdomen, which renders the affinity of these species the closer.

Sp. 7. *Myrmica cæspitum*.

Fœmina.—Fusco-nigra, nitida, flavido-pilosula; mandibulis, antenarum flagellis, articulationibus pedum tarsisque pallidis; capite, pleuris et metathorace longitudinaliter striatis opacis; metathoracis spinis mediocribus validiusculis, obtusiusculis; alis hyalinis, stigmatibus cinereo-fusco.

Operaria.—Fusco-nigricans, sparse pallide pilosula; mandibulis, antennis pedibusque rufo-testaceis, articulationibus et tarsis

rufo-pallescens; capite thoraceque subtiliter longitudinaliter rugulosis; spinis metathoracis minutis dentiformibus; nodis petioli sublævibus.

Mas.—Niger, parcissime flavido-pilosulus; mandibulis, antennis pedibusque sordide pallescens, flagellis et tarsis dilute pallidis; capite parvo thoraceque subtiliter striatulis; thoracis marginibus anticis et lateralibus nitidis; alis hyalinis, nervis pallescens, stigmatibus pallide fuscis: spinis metathoracis nullis; nodis sublævibus.

Formica cæspitum, Linn. Faun. Suec., No. 1726 ♀; Syst. Nat., 963, 11; Latr. Hist. Nat. Fourm., p. 251, tab. 10, fig. 63 ♂.

Formica binodis, Amœn. Acad., vi. p. 413, 94 ♀; and Sp. in Cab. Mus. Linn. Soc.

Myrmica fuscula, Nyland. Adno. Mon. Form., 935, 6 ♂, ♀, tab. 18, fig. 36, ♀; Addit. Adno., p. 1053, ♀; Foerster, Hym. Stud. Form., p. 56, 29.

Myrmica cæspitum, Curtis, Trans. Linn. Soc., xxi. 215, 8.

Manica cæspitum, Jurine, p. 279.

Female.—Length $3\frac{1}{2}$ lines. Very dark fuscous, or quite black; the head narrower than the thorax, and longitudinally striate; ocelli of a glassy brightness; the mandibles and antennæ dark ferruginous; the scape, except the extreme apex, slightly fuscous, as well as the flagellum towards the apex, the apical joint paler; thorax somewhat flattened above, the mesothorax being on each side delicately and obliquely strigose; the scutellum finely strigose; the mesothorax has on each side, a little within and before the insertion of the wings, an abbreviated impressed line, and has in front a smooth shining space; the metathorax longitudinally rugose above, the lateral spines short, stout and sub-acute; the truncated portion of the metathorax below the insertion of the spines is transversely sulcate; the wings clear hyaline, the nervures very pale, the stigma pale fuscous; sometimes the wings are very faintly smoky at their base; the legs rufo-fuscous, their articulations, as well as the tarsi, rufo-ferruginous. Abdomen elongate ovate, rather broader than the thorax, and rather longer, the apical margins of the segments rufo-piceous; the first node is rugose, the second faintly roughened behind, the superior margin of both nodes smooth and shining.

Worker.—Length $1\frac{1}{4}$ —2 lines. The colour like that of the

female, but frequently paler, the legs being usually so; the head subquadrate, much wider than the thorax, and longitudinally striate, the mandibles and antennæ as in the female; the vertex is slightly concave behind, the angles being rounded; the thorax a little longer than the head, widest in front, finely longitudinally rugose-striate; the metathoracic spines short and acute; the nodes smooth and shining above, faintly strigose at the sides; the legs and abdomen as in the female.

Male.—Length $2\frac{1}{2}$ —3-lines. Dark fuscous, or black; head small, much narrower than the thorax, sub-opaque, longitudinally rugose-striate, ocelli glassy and bright; the mandibles, antennæ, joints of the legs and the tarsi, pale testaceous, the flagellum fuscous at the base. Thorax rounded and swollen anteriorly; on each side anteriorly is an oblique impressed line, meeting in the middle of the mesothorax; the angular shape thus formed is highly polished and impunctate; on each side before the insertion of the wings, about half-way between that and the oblique line, is an abbreviated impressed line; the centre of the thorax behind the angular shape in front is longitudinally striated; a shining space on each side surrounding the lateral impressed line; the scutellum transversely and very finely strigose; the metathorax longitudinally striate; wings hyaline, the stigma pale fuscous; the nodes obsoletely rugose. Abdomen ovate, smooth and shining; the apical margins of the segments pale rufo-testaceous.

The antennæ of the male have apparently only ten joints, but when viewed under a high power of the microscope, the third joint will be found to consist in reality of three joints; the fifth is composed of two, thus making the number really thirteen.

This is a local but abundant species on many parts of the coast; it appears to frequent such situations, I have not found it in any other; it is very plentiful at the back of the Isle of Wight, in Sandown Bay, Luccomb and Shanklin Chines; there are large colonies at Shoeburyness, below Southend, where in August I obtained all the sexes: Mr. Dale has taken it at Charmouth. I have little doubt of this being the *F. cæspitum* of Linnæus, as quoted by Latreille; it is certainly that of the latter author.

Sp. 8. *Myrmica acervorum*.

Fœmina.—Sordida, pallide rubida, sparse pilosula; capite, thorace abdomineque fusco-nigricantibus supra; capite longitudi-

naliter striatulo; alis totis albo-hyalinis, spinis metathoracis mediocribus; nodis parum scabris.

Operaria.—Sordide rubra, sparse pilosula; capite abdomineque supra fusciscentibus; capite longitudinaliter striatulo; thorace nodisque petioli rugoso-scabriusculis, metathorace spinis mediocribus.

Mas.—Niger, cinereo-pilosulus; tibiaram basi apiceque, tarsisque dilute pallidis, metathoracis apice polito, utrinque angulatim tuberculato; alis lacteo-hyalinis.

Formica acervorum, Fabr. Ent. Syst., ii. 358, 38, ♀; Syst. Piez. p. 407, 50.

Myrmica acervorum, Zett. Ins. Lapp., 451, 3, ♀, ♂; Nyland. Adno. Mon. Form., 936, 7, ♂, ♀, ♂; Foerster, Hym. Stud. Form., 61, 32; Curtis, Trans. Linn. Soc., xxi. 215, 6.

Myrmica lacteipennis, Zett. Ins. Lapp., p. 452, 5, ♂.

Female.—Length $1\frac{3}{8}$ lin. Head elongate, subquadrate; above the insertion of the antennæ, but not quite extending to the vertex, fuscous; the rest of the head pale ferruginous; the three apical joints of the antennæ fuscous; the thorax, legs and nodes pale ferruginous; the thorax indistinctly longitudinally striated, slightly fuscous at the insertion of the wings; spines of the metathorax short, stout and acute; the first node slightly roughened behind, the second smooth, or faintly sculptured. Abdomen oblong-ovate, dark fusco-ferruginous, pointed at the apex, and sprinkled with pale glittering hairs.

Worker.—Length $1\frac{1}{2}$ lin. This scarcely differs from the female in anything but size, except in the usual compression of the sides of the thorax, and in the absence of the ocelli; the spines are rather stouter and longer, and the second node is rather more distinctly sculptured with fine striæ.

Male.—Black, the tarsi and articulations of the legs pale testaceous; the entire insect is thinly clothed with long cinereous pubescence; the antennæ apparently 12-jointed; the palpi minute, pale testaceous; the mandibles truncate at their apex.

This, like most of the small species, is rarely met with. I once found a colony on Shirly Common, under the bark of a decaying tree; it consisted of one female and about fifteen workers. Mr. Dale has taken it in the New Forest, at Glanvilles Wootton, and at Lulworth. I have also received it from Scotland.

9. *Myrmica graminicola*.

Fœmina.—Rufo-pallida, sparse pilosula; capite et thorace supra longitudinaliter striatulo; alis totis albo-hyalinis: spinis metathoracis parvis dentiformibus; nodis sublævibus, primo elongato, secundo globoso.

Myrmica graminicola, Latr. Hist. Nat. Fourm., p. 255; Curtis, Trans. Linn. Soc., xxi. 216, 11.

Female.—Totally pale ferruginous: head elongate, subquadrate, strongly longitudinally rugose-striate; the scape slightly bent, tips of the mandibles fuscous; the thorax longitudinally rugose; the metathoracic spines short and acute; the wings hyaline, the nervures and stigma pale testaceous; the first node of the abdomen petiolate, not toothed beneath, the second node globose; the abdomen oblong ovate; the entire insect sprinkled with pale glittering hairs, rather thickly so on the head and abdomen.

Worker.—Length $1\frac{1}{2}$ lin. Rufo-testaceous: the head elongate, strongly longitudinally rugose-striate; eyes black, round and very minute; flagellum 11-jointed, gradually thickening from base to apex, the apical joint conical and acute; the head anteriorly, mandibles, antennæ and legs, pale ferruginous; thorax: narrow, elongate, strongly longitudinally rugose-striate; anteriorly rounded and widest, deeply strangulated at the junction of the meta- and mesothorax; the teeth on the metathorax short, acute and dentiform. The first node petiolate, the second rather wider than the first, globose, both are shining above; abdomen smooth and shining, pale testaceous at the base and apex.

Male.—Dark fuscous: shining and sparingly pubescent, the parts of the mouth and the tarsi pale ferruginous; the flagellum obscure reddish brown, the scape black; the head and thorax rugose; the metathorax oblique, smooth and shining, subdentate; the wings entirely dark fuscous, with the nervures black.

I have not seen the male of this species; the above description is compiled from Latreille. I have twice taken the female flying; once at Paddington, in the month of September, and a second example near London, but do not recollect the precise locality. A third winged female was captured by the late Mr. Wing, on the 4th of December, at Vauxhall. The scarcity of some species of *Myrmicidæ* is to be attributed to their peculiar economy, and also to their societies being few in number. As an example of the first, I refer the student to the remarks under *M. fugax*.

I feel pretty certain of this species being Latreille's, since it not only agrees in colour, but also in having the first node of the abdomen elongated into a petiole, and in not being toothed beneath.

Sp. 10. *Myrmica fugax*.

Operaria.—Minuta, pallide flavescens, lævis, nitida; antennarum clava flagelli biarticulata; metathorace declivi mutico, pedibus pallescentibus; abdomine medio supra subfasciatim fuscescente.

Formica fugax, Latr. Hist. Nat. Fourm., p. 265.

Myrmica flavidula, Nyland. Addit. Adno. Mon. Form., p. 43, 12?

Worker.—Length $\frac{3}{4}$ -1 lin. Head and thorax of a pale reddish yellow, the abdomen usually having a dark obscure fascia, and a similar spot on the front of the head, towards the insertion of the antennæ; sometimes entirely very pale yellow, particularly the smaller specimens. Head elongate, the sides nearly parallel, slightly widest at the eyes, which are very minute and black; the club of the flagellum composed of two joints, the apical joint thrice the length of the first, conical, and very acute at the apex; the antennæ slightly pubescent. Thorax: rounded anteriorly, slightly strangulated between the meso- and metathorax, the latter obliquely declined posteriorly, not having the slightest tubercle or tooth; the first node wider than the second, somewhat pear-shaped, the second globose; abdomen oblong-ovate, and the entire insect highly polished and shining.

I have not yet obtained British examples of the other sexes: I possess females sent to me by M. Mayr of Vienna; these very closely resemble the female of *M. cæspitum*, but are only $1\frac{1}{2}$ of a line in length, being of a very dark brown-black; the mandibles, antennæ and legs are pale rufo-testaceous, and the wings hyaline.

This minute species was not known as a British insect until the autumn of 1854, when I discovered a colony under ground, on the shore below Southend. The habit of the species appears to be subterranean; I visited the spot daily at all hours, but never saw one above ground, but by digging I could always find them; visiting the spot at night was attended with the same results; some of the chambers, at the depth of six inches, contained pupæ of males and females, but I failed in bringing them to maturity in an artificial situation.

If this species be not identical with the *M. flavidula* of Nylander, it must be very closely allied.

Sp. 11. *Myrmica unifasciata*.

Fœmina.—Rufo-pallida, sparse setulosa, abdominis segmento secundo fuscescente; capite et mesothorace subtiliter longitudinaliter scabriusculis; alis hyalinis, nervis pallidis subobsoletis; spinis metathoracis minutis dentiformibus; nodis sublævibus.

Operaria.—Rufo-pallida, sparse setulosa; capite abdomineque fasciis fuscescentibus; capite longitudinaliter striato, thorace nodisque subtiliter rugoso-scabriusculis; spinis metathoracis mediocribus acutiusculis.

Mas.—Fusco-testaceus, nitidus; abdominis segmentis dilutioribus; metathorace tuberculis utrinque obsoletis; alis lacteo-hyalinis; nervis sub-obsoletis; antennis, palpis pedibusque pallide testaceis.

Formica unifasciata, Latr. Hist. Nat. Fourm., 257.

Myrmica unifasciata, Nyland. Addit. Adno. Mon. Form., p. 44; Curtis, Trans. Lin. Soc., xxi. 216, 12.

Manica unifasciata, Jurine, Hym., p. 279.

Female.—Length $1\frac{3}{4}$ lin. Rufo-testaceous: sprinkled with a few erect scattered hairs; the head finely longitudinally rugose-striate; the stemmata very prominent, and of a glassy brightness; the scape and base of the flagellum pale flavo-testaceous, the legs are of the same colour; antennæ apparently 12-jointed. Thorax rounded anteriorly, the mesothorax finely longitudinally striated; the insertion of the wings, the scutellum and post-scutellum, rufo-fuscous, the scutellum smooth and shining in the middle; the spines on the metathorax short and acute; the wings hyaline, the nervures scarcely discernible; the nodes nearly smooth, shining, the first slightly roughened. Abdomen ovate, smooth and shining, the first segment pale at the base, beyond which it is rufo-fuscous, sometimes entirely fuscous, or with the basal margins pale.

Worker.—Closely resembles the female, differs in wanting the ocelli, and in having the sides of the thorax compressed, and slightly strangulated at the apex of the mesothorax, which is much more finely sculptured than in the female, and granulated: the teeth on the metathorax minute, acute at their apex. Abdomen ovate, very smooth and shining, the first segment

having a broad rufo-testaceous fascia; sometimes the following segment rufo-testaceous.

I have not captured the male of this species; the diagnosis is from a specimen sent to me by M. Mayr of Vienna, and from the only British example which I have seen in Mr. Dale's collection; the species is rare. I have usually taken it in winter in moss, but once met with a colony in some decayed wood, and captured several females; this was nearly twenty years ago, in Colney Hatch Wood, since which I have not found it. The late Mr. Wing found a colony at Lambeth, and Mr. Dale has taken it in the New Forest and at Lulworth; he has also captured the male, which I suspect to be the *Stenammina albipennis*. The species very closely resembles the *M. muscorum* of Nylander, which species is more strongly sculptured, and the thorax longer and more deeply strangulated. The male has scarcely the slightest trace of neuration in the wings.

Sp. 12. *Myrmica simillima*.

Operaria.—Rufo-pallida, abdomine fuscescente, basi pallido; capite longitudinaliter striolato; thorace longitudinaliter striatim-ruguloso; metathorace spinis parvis acutis dentiformibus.

Myrmica simillima, Nyland. MSS.; Smith, Cat. Brit. Hym., p. 118; Curtis, Trans. Linn. Soc., xxi. 216, 10.

Worker.—Length $\frac{3}{4}$ line. Head, thorax and nodes of the abdomen rufo-testaceous; the mandibles, flagellum and legs pale flavo-testaceous; abdomen shining, rufo-fuscous, pale at the base and extreme apex; head longitudinally strigose; antennæ 12-jointed. Thorax above rugose-striate; nearly transverse anteriorly or very slightly rounded, the angles acute, the usual divisional suture between the meso- and metathorax obsolete; the sides are doubly notched; the metathoracic spines short, dentiform and acute; the thorax is gradually narrowed towards the metathorax, which is truncate at the apex. Abdomen highly polished, and more or less rufo-fuscous, varying a little in different individuals; the nodes are finely rugose, the first being the most coarsely so. The entire insect is very thinly sprinkled with short erect pale hairs, most apparent on the abdomen at its apex.

I received this insect some years ago from Mr. Dale, who informed me that he had found them near his house at Glanvilles Wootton, Dorsetshire. It is closely allied to *M. tubercum*; indeed I had considered it to be that species, and as such had included

it in my British list, but Dr. Nylander presented me with the insect which is considered on the continent to be Latreille's *F. tuberum*: *M. simillima* differs in being much more deeply sculptured on the head, thorax and nodes of the abdomen, but it agrees in the essential and most characteristic specific distinction pointed out by Latreille, "le corcelet est court, conique, tronqué, comprimé insensiblement sur les côtés, aux le dos continu." For the sake of uniformity of opinion, however, I adopt with pleasure the views of Dr. Nylander, and other eminent Hymenopterists.

Sp. 13. *Myrmica* (?) *lævigata*, sp. nov.

Operaria.—Rufo-testacea, lævis, tota nitidissima nuda; mandibulis, antennis, pedum articulationibus tarsisque pallescentibus; nodo primo angusto; metathoracis spinis minutissimis.

Worker.—Rufo-testaceous; the mandibles, antennæ, joints of the legs, and the tarsi, pale testaceous; head highly polished, smooth and shining; antennæ 12-jointed, the scape as long as the head, the flagellum of about the same length: the scape most slender at its base; the three apical joints of the flagellum elongate, forming an elongate club, the apex acute; the three apical joints half the length of the flagellum. Thorax: smooth and shining, forming a sort of neck anteriorly, behind which it is dilated and rounded at the sides; above convex, smooth and shining; beyond the dilatation it is elongate, the sides being parallel, the apex of the metathorax truncate and delicately reticulated, the spines very minute; the nodes smooth and shining, the first petiolated; the second widest and globose; abdomen ovate, smooth, and shining; the legs elongate.

I captured this insect some years ago at Battersea; it differs so materially in form from the rest of the genus, that it is placed here with some hesitation and a suspicion that it may prove to be the female of *Stenammina*, but having only the single specimen described, I am unable to examine the parts of the mouth as satisfactorily as I could wish and leave it to be determined by some more fortunate student of this interesting group.

Sp. 14. *Myrmica domestica*.

Fœmina.—Pallide testacea, thoracis macula antica, scutello abdomineque fusco-nigris, basi solum pallido; clava flagelli triarticulata, metathorace mutico.

Operaria.—Pallide flavo-testacea, lævis; abdomine nitido, apice fuscescente.

Mas.—Fusco-testaceus, nitidus; antennis pedibusque pallide testaceis, antennis 13-articulatis; metathorace inermi; alis albo-hyalinis.

Myrmica domestica, Shuck. Ann. Mag. Nat. Hist., p. 626, (1838) ♀; Bostock, Trans. Ent. Soc. Lond., ii. 65; Smith, Cat. Brit. Hym. Append., p. 119, ♀, ♂; Daniell, Proc. Linn. Soc. ii. p. 172; Curtis, Trans. Linn. Soc., xxi. 217, 13.

Female.—Length $1\frac{3}{4}$ lines. Pale rufo-testaceous, the antennæ apparently 12-jointed; a minute black stain behind the anterior ocellus, and a similar one within each of the lateral ones, the stains touching the ocelli. Thorax elongate-ovate, having anteriorly a central elongate stain, a smaller one on each side, and the scutellum behind, fuscous; the legs very slender, and pale rufo-testaceous as well as the tips of the femora. Abdomen fusco-testaceous: ovate, smooth and shining; the base pale, also the apical margins of the two, or sometimes three, following segments.

Worker.—Pale reddish yellow: the apex and sides of the abdomen more or less fusco-testaceous, the antennæ 12-jointed; the head and thorax sub-opaque, the abdomen smooth and shining; the metathorax without spines; the thorax strangulated at the junction of the meta- and mesothorax.

Male.—Length 1 line. Fusco-testaceous: the head usually darkest, very delicately roughened and sub-opaque; ocelli prominent: the antennæ and legs pale testaceous; the scape slightly fuscous, sometimes only towards the base, the antennæ covered with very short pubescence. Thorax: very closely and very delicately punctured; the wings hyaline, the metathorax not spined. Abdomen ovate, smooth and shining; the scutellum is very convex, and the metathorax has a central longitudinal impressed line.

I have included this species amongst our indigenous insects, it having apparently become quite naturalized, but I have very strong reasons to believe that it was introduced. I resided in a house where this little pest had taken up its abode. The *Formicarium* was in the kitchen beneath the hearth, from thence up to the top of the house was a continuous line of ants constantly passing in opposite directions; the line became less multitudinous as it extended up-

wards. At every meal the ants swarmed on the dishes, and became exceedingly annoying by getting under the dresses of the inmates. Their multitudes were in the first instance thinned by putting pieces of meat into bottles without corking, and laying them near their *Formicarium*. Attracted by these baits, millions were destroyed, and in summer when the males and females first appeared, the hearth-stone was raised, and boiling water thrown over apparently countless myriads! At that time I obtained the sexes, which usually escape notice from their minuteness, but in houses infested they may be found on the windows. I never saw a female winged, and I have taken that sex at the same time as the winged males from the nest.

GENUS MYRMECINA, Curtis.

Antennæ inserted in the middle of the face, not approximate, 12-jointed apparently in the female, 13-jointed in the male; the females mandibulate; mandibles sometimes wanting in the males. Maxillary palpi 4-jointed; labial palpi 3-jointed. Wings, anterior pair having one marginal cell, appendiculated at its apex; one sub-marginal cell, a little longer than the marginal; the discoidal cells wanting; the metathorax armed with spines in the females; the abdomen having two nodes at its base.

Sp. 1. *Myrmecina Latreillii*.

Fœmina.—Rufo-fusca; clypeo bidentato; clypeo, mandibulis, antennis, metathorace postice pedibusque rufo-pallidis; capite ruguloso, thorace supra longitudinaliter profunde striato; metathoracis spinis dentiformibus acutis; alis fusco-brunneis.

Mas.—Fusco-niger; ocellis prominulis; flagellis pallide rufo-testaceis; scapo brevi crassiusculo, fusco; pedibus testaceo-rufis; alis fusco-brunneis.

Myrmecina Latreillii, Curtis, Brit. Ent., vi. tab. 226 ♂; Trans.

Linn. Soc., xxi. 218, 16, tab. 4, fig. 22;

Westw. Introduc., ii. tab. 86, fig. 11.

Myrmica graminicola, Foerster, Hym. Stud. Form., 58, 30 ♂.

Female.—Length $1\frac{3}{4}$ lin. Head, thorax above, and the abdomen, nigro-fuscous; the face before the insertion of the antennæ, the latter as well the mandibles rufo-testaceous; the scape stout, about two-thirds of the length of the flagellum, of equal thickness

its entire length; the antennæ pubescent; the head finely rugose; the mandibles stout, curved and obliquely truncated at their apex, the truncation finely denticulate; the clypeus bidentate. Thorax: above finely longitudinally rugose-striate, the scutellum shining and smooth; the metathoracic spines short, slightly bent outwardly; wings of a fuscous brown, the stigma large and trigonate, and, as well as the nervures, fusco-testaceous; the wings covered with very fine short pubescence, and their margins ciliated with short hairs; the legs, neck and suture of the scutellum pale ferruginous; the thorax at the sides and beneath and also the nodes rufo-fuscous; the latter coarsely rugose. Abdomen: shining, oblong-ovate, and slightly widest posteriorly.

Worker.—Not known.

Male.—Length $1\frac{1}{2}$ lines. Dark fusco-testaceous; the eyes ovate, large and prominent; ocelli prominent, of a glassy brightness; the mouth, antennæ and legs pale rufo-testaceous, the scape usually fuscous above; the antennæ pubescent, the head has a few scattered hairs; the thorax above and the nodes finely rugose; the scutellum smooth and shining in the middle; the metathorax emarginate the entire width, the angles prominent, sub-dentate; wings of a rather paler colour than in the female. Abdomen oblong-ovate, smooth, shining and having, as well as the nodes, a few scattered long hairs.

Although this genus very closely approximates to that of *Myrmica*, still the different neuration of the wings, a certain difference in the proportions of the antennæ, and of the structure of the nodes of the abdomen, constitute a series of characters which I consider of generic value. It is not by the examination of the single British species that I am induced to arrive at this conclusion; others from New Holland, &c., show a beautiful modification in form between this and allied genera. I must observe, however, that the males of some species have their mandibles more or less developed.

This species was discovered by Mr. Curtis some years ago: at that time males only were captured; the type is beautifully figured in "The British Entomology" of Mr. Curtis. I have captured this apparently rare insect in the same locality that Mr. Curtis first discovered it, at the back of the Isle of Wight, near Luccombe Chine, when I took one female and one male; one male at Colney Hatch, and one female at Camden New Town. I expect the societies, like those of *Ponera*, must be very small, as no one has discovered the worker.

Genus STENAMMA, Steph.

Basal joint of the antennæ long; abdominal peduncle 2-jointed, the first petiolate; antennæ 13-jointed; maxillary palpi 4-jointed, labial palpi 3 jointed; mandibles broad, oblique and 5-dentate.

Sp. 1. *Stenamma Westwoodii*.

Mas.—Pallido-fuscus, nitidus; antennis, partibus oris, tarsis, pedum articulationibus pallide testaceis; alis hyalinis, nervis testaceis; metathorace sub-dentiforme.

Stenamma Westwoodii, Steph. Syst. Cat., p. 356, 48, 38; Westw. Intro. Class. Ins., ii. 226, tab. 86, fig. 11, and details.

Male.—Length $1\frac{1}{2}$ lin. Fusco-testaceous; the antennæ, tarsi and articulations of the legs pale testaceous; the head and thorax finely rugose above; the eyes and ocelli prominent, the latter of a glassy brightness: the neururation of the wings as in *M. unifasciata*, the metathorax emarginate its entire length, the lateral angles acute and prominent, scarcely dentate. Abdomen: oblong-ovate, smooth and shining, the extreme apex pale testaceous; the petiole elongate; the first segment pear-shaped; the second sub-globose, wider than the first, and smooth and shining.

I have great doubts whether this insect possesses sufficient generic distinctive differences to entitle it to a separation from the genus *Myrmica*. I do not possess a specimen, and therefore cannot examine, as I could wish, *all parts of the insect*; but the only character in which it appears to differ from *Myrmica* is in having 3-jointed labial palpi. An examination of the parts of the mouth of several males proves the relative proportions of the joints to be various, and in *M. unifasciata* the basal joint is so small, or altogether wanting, that I cannot detect it; I think this male may possibly prove to be that of *M. lævigata*.

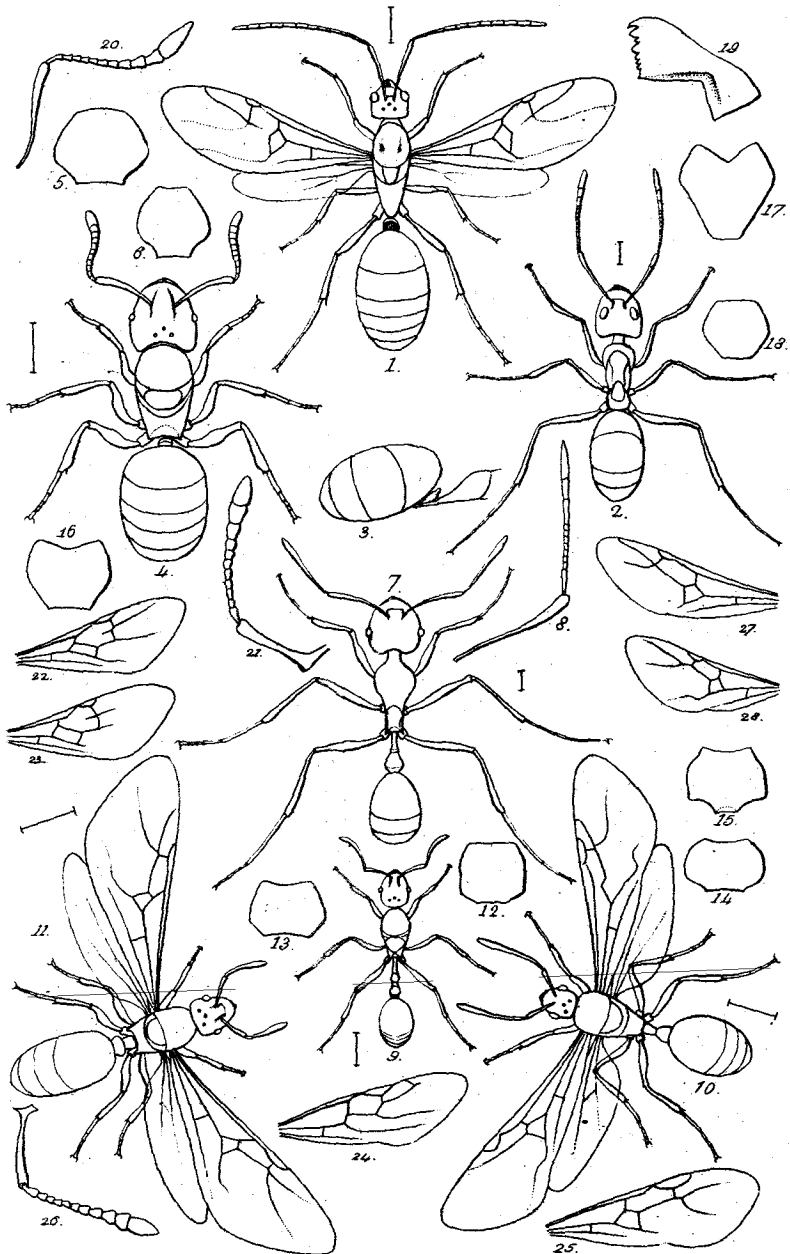
Sp. 2. *Stenamma albipennis*.

Stenamma albipennis, Curtis, Trans. Linn. Soc., xxi., 217, 15,
♂ & ♀.

I do not know this species; Mr. Curtis gives the locality of Folkestone, near Dover.

DESCRIPTION OF PLATE IX.

- Fig. 1. *Tapinoma erraticum*. Male.
 2. *Tapinoma levigatum*. Worker.
 3. Profile of the abdomen of the same, showing the decumbent scale, and the metathorax.
 4. *Formica umbrata*. Female.
 5. Abdominal scale of *Formica umbrata*. Female.
 6. Abdominal scale of *Formica umbrata*. Worker.
 7. *Myrmica levigata*. Worker.
 8. Antennæ of *Myrmica levigata*. Worker.
 9. *Myrmica graminicola*. Female.
 10. *Myrmica cæspitum*. Male.
 11. *Myrmica cæspitum*. Female.
 12. Abdominal scale of *Formica sanguinea*. Male.
 13. Abdominal scale of *Formica rufa*. Male.
 14. Abdominal scale of *F. cunicularia*. Male.
 15. Abdominal scale of *F. fusca*. Male.
 16. Abdominal scale of *F. nigra*. Female.
 17. Abdominal scale of *F. flava*. Female.
 18. Abdominal scale of *F. flava*. Worker.
 19. Mandible of *F. rufa*. Worker.
 20. Antennæ of *Myrmica ruginodis*. Worker.
 21. Antennæ of *M. scabrinodis*. Worker.
 22. Wing of *Myrmica levinodis*. Female.
 23. Wing of *M. scabrinodis*. Female.
 24. Wing of *Myrmecina Latreillii*. Female.
 25. Wing of *Stenamma Westwoodii*.
 26. Antennæ of *Myrmica identicornis*.
 27. Wing of *Formica nigra*. Female.
 28. Wing of *Formica flava*. Female.
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Fred^z Smith. Del^t
1854.