

X. *Description of a new Genus of Plants from Brazil.* By JOHN MIERS, Esq.,  
F.L.S.

Read March 2nd, 1841.

ON my last visit to the Organ Mountains in February 1838, prior to my departure from Rio de Janeiro, I observed growing in a green sward of *Jungmannia*, upon the banks of the river Paquequer, within the influence of an atmosphere rendered extremely humid by the fine spray from an impending waterfall, a minute plant, of a very transparent texture and of a singular structure, a notice of which I now beg to offer to the consideration of the Linnean Society. It is constantly unisexual, the male and female plants growing near to each other in the same spot: its root consists of several branched fibres; and its stem, composed of cellular tissue, is erect, cylindrical, striately ribbed, and about an inch in height, presenting near its base two or three small, distant, bract-like, acute, adpressed leaves. The inflorescence is either solitary and terminal, or divides into two or three one-flowered branches proceeding from the axil of an obovate bract larger than the leaves: the bracts are somewhat spathe-like, and somewhat amplexicaul at the base, with an acute point, enwrapping the bud in its young state: it withers, but is persistent. Each peduncle is erect, striated, and one quarter to three-eighths of an inch in length, supporting a solitary flower. The flower in bud appears like a three-sided cone with rounded angles, exhibiting near the apex three pore-like minute apertures, which are openings into as many long coiled tubes, easily distinguishable through the semi-diaphanous perianthium. This perianthium is persistent, and is composed of three distinct obovate segments, concave in the bud, with valvate æstivation, the sutures being alternate with the rounded angles: when expanded it is fully patent, with the margins laterally reflected, and from just below the apex of each segment, on the inner surface, proceeds a hollow capillary horn of three times the length of the segments, which, though coiled in æstivation, as before mentioned, is quite patent and extended when



the flower expands. In the male plant are observed three distant pairs of anther-lobes, of an oval form, suspended side by side from the summit of corresponding cavities in the base of a somewhat three-sided, central, hyaline cone of a fleshy consistence, which, when cut through, exhibits a structure formed of numerous minute, lengthened, adhering cells; the lobes of the anthers are opaque and white, bursting outwardly by a longitudinal fissure: the pollen is white and somewhat farinaceous. These pairs of anther-lobes probably belong to different stamina, the enlarged connectives of which form the bulk of the fleshy cone; in which view of the case the stamina would be placed opposite to the segments of the perianthium, and not alternate with them, as they at first sight appear. In the female plant, which in size and habit exactly resembles the other sex, the structure of the perianthium is precisely similar; and in lieu of the central staminiferous cone, there appears an entirely superior, semiglobular mass, consisting of innumerable minute carpels, with rather long, subulate, free-pointed styles: though I could not distinguish any stigma, it is probable that this organ, which is too minute to be seen, is lateral, since the summit of the style is somewhat gibbous. I cannot find a record of any plant bearing a resemblance to the one under consideration, which I believe to be quite new, and may, from the very characteristic subulate processes of the perianthium, be better distinguished by the name of *Triuris* than by that of *Mycopsis*, by which I had at first designated it. The following are the details of its characters:—

#### TRIURIS.

CHAR. DIFF. *Flores* dioici. *Perianthii foliola* 3, obovata, infra apicem processu longo instructa. ♂. *Antheræ* 3, sessiles, loculis disjunctis, imo androphoro magno carnoso centrali insertæ. ♀. *Pistilla* numerosissima, aggregata, supera. *Styli* simplices, subulati. *Fructus* (ignotus).

*Planta pusilla, hyalina, subaphylla; foliis bracteiformibus.*

CHAR. NAT. *Flores* dioici. *Perianthium* 3-phyllum, hyalinum, persistens; foliola obovata, præfloratione valvata, post anthesin patentia, marginibus reflexis, infra apicem cornu capillari, cylindræo, 2-3plò longiore, ante anthesin gyrato incluso, demùm porrecto, patentissimo, instructa. ♂. *Stamina* 3, sessilia. *Antheræ* 2-loculares, loculis ovalibus, disjunctis, longitudinaliter dehiscentibus, in foveis basalibus androphori apice suspensis. *Pollen* album, subfarinaceum. *Androphorum* centrale magnum carnosum hyalinum obtusè conico-3quetrum, in quovis latere foveâ basali, in quâ antherarum loculi sus-



pensi. ♀. *Gynæcium* superum, e pistillis minimis numerosis uniovulatis aggregatis, singulo stylo libero superato, compositum. *Styli* subulati. *Fructus* (ignotus).

Planta Brasiliensis omninò diaphana, albida; ♂ et ♀ in distinctis stirpibus; radice fibrosâ. Caulis simplex, erectus, pollicaris, striatus, subaphyllus. Folia pauca, bracteiformia, adpressa, obovata, acuta, hyalina. Flores solitarii vel subracemosi; pedunculus uniflorus,  $\frac{1}{4}$ -pollicaris, basi bracteatus; bractea folio caulino paululùm major et latior, subamplexicaulis.

*T. hyalina.*

*Hab.* in humidis Serra dos Orgãos Provinciæ Rio de Janeiro.

At the period of my quitting the Organ Mountains the female plant had not attained a sufficient degree of maturity, and I was not able to observe in each carpel more than what appeared to me a solitary ovule in a very elementary stage, and this was so minute and indistinct as to be evident only by the appearance of a darker oval form in the centre. I cannot, therefore, offer any positive evidence as to the character of the embryo or structure of the seed, or whether it is mono- or di-cotyledonous. I am led to place it from its general aspect near to *Juncagineæ* or *Fluviales*, some of which are also occasionally diœcious, and *Posidonia*, which is sometimes polygamous, has three approximate pairs of sessile anthers on a receptacle: the plants of these orders, however, have no perianthium, or, at most, a very depauperated one, while *Triuris* is remarkable for the development of this organ. There exists some resemblance in the appearance of the stems, scale-like leaves, and general subhyaline texture, to the Burmanniaceous plants found in the same locality; but the difference of general structure removes it entirely from that family. To some of the terrestrial species of *Orchideæ* it bears a slight resemblance in habit, and also in the union of the connectives or filaments into a central columnar mass, in which respects it also bears a slight resemblance to *Apostasiæ* and *Aristolochiæ*, although in all other essential points it is quite at variance with them. In *Myristicæ* also we find diœcious plants with the same character; but in all these cases the structure and situation of the ovaries, the form of the perianthium, and every general character are totally dissimilar. The diœcious genus *Ruscus*, too, placed by some in *Liliaceæ*, by others in *Smilacæ*, offers the male flower with three or six sessile anthers, upon a fleshy central column, but its female flower is of a wholly different structure to that



of *Triuris*; and the plant itself, though presenting also only bracteiform leaves, is very unlike it in habit. It is deserving of notice, that the leaves of some *Bu-tomeæ* offer an analogy with the sepals of *Triuris* in the remarkable foramen observed in their apex.

The texture of the membranous coat of the ovulum, viewed under a high magnifying power, presents the same appearance as the epidermis of the whole plant, viz. raised prominent vesicles, having in the centre of each globule or cell a distinct nucleus offering that peculiar kind of texture which has been pointed out by Mr. R. Brown as generally existing, though frequently less perfectly developed, in all monocotyledonous plants.

From all these considerations, it seems to me we may safely conclude that *Triuris* belongs to the class of Endogenous plants; and, as it cannot be distinctly referred to any of the orders above-mentioned, it may probably be taken as the type of a distinct family, holding a place between *Burmanniaceæ* and *Fluviales*, but whose positive rank in the system cannot be known until we obtain more perfect information relative to the structure of the embryo.

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#### EXPLANATION OF TAB. VII.

Fig. *a*. Male plant of *Triuris hyalina*, of the natural size. A. Slightly magnified.

1. An unopened bud.
2. The same, seen from above.
3. The same, artificially opened.
4. An expanded flower, seen laterally.
5. The same, seen from above. All slightly magnified.
6. A section of the fleshy cone supporting the anthers, more highly magnified.

Fig. *b*. Female plant of the same, of the natural size. B. Slightly magnified.

7. An unopened bud.
8. The same, artificially opened.
9. An expanded flower.
10. The pistilla, after the removal of the perianthium. All slightly magnified.
11. A single pistillum, more highly magnified.
12. Cells of the epidermis of the ovulum, highly magnified.





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