

ON THE GROUPING OF SPECIES IN GENERA IN THE TRIBE
ELYTRANTHEAE OF THE LORANTHACEAE FAMILY;

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It will be recalled that one of the first results obtained in this study was the subfamily of the Loranthoideae into two main groups according to the conformation of the pistil, depending on whether the ovary is unilocular or plurilocular (1). Loranthoideae with a unilocular ovary are divided, according to whether the seed is albuminous or not, into two tribes: the Lorantheae and the Psittacanthae. From then on, the Loranthoideae with plurilocular ovary are divided, according to whether the fruit is a berry or a drupe, into two tribes: the Elytrantheae and the Gaiadendreae. The problem of grouping species into genera has been dealt with in a series of earlier papers for the two tribes of Loranthoideae with unilocular ovaries: Lorantheae and Psittacanthae. It remains to be solved for the two tribes of Loranthoideae with plurilocular ovary: Elytrantheae and Gaiadendreae. Today we will confine ourselves to the Elytrantheae.

The Elytrantheae tribe therefore contains all the Loranthoideae whose ovary is plurilocular and whose fruit is a berry. They all inhabit Asia and Oceania. Some have the dialysepal calyx and basifixed anthers: they form the subtribe the Treubelleae. Others have the gamosepalous calyx and basifixed anthers: they form the Macrosolenae subtribe. Others, finally, have the gamosepalous calyx and the dorsifixed anthers, although not oscillating: they form the subtribe the Loxanthereae. Let us consider successively each of these three subtribes.

I. ELYTRANTHEAE WITH A DIALYSEPALOUS CALYX AND
BASIFIXED ANTHERS FORMING THE TREUBELLEAE SUBTRIBE

Although few in number until now, the species of the Treubelleae subtribe are grouped, according to their various modes of inflorescence, into several genera.

The inflorescence is, in fact, sometimes simple, sometimes composed of triads. In the first case, if the flowers are solitary in the axils of the leaves, it is the new genus *Perella*. If they are arranged in an axillary spike, it is the genus *Peraxilla*.

In the second case, the flowers are always arranged in a cluster of triads. But sometimes each triad, having the sessile median flower and the pedicellate lateral flowers, is a biparous cymule: this is the genus *Treubella*. Sometimes each triad, having its three flowers sessile, is a trifloral anthodium: this is the new genus *Decaisnina*.

A few words about each of these four genera.

1. On the new genus PERELLA. - Having, in two previous Notes, first established the genus *Peraxilla* (2), then attributed to this genus its true place in the tribe of Elytrantheae (3), I had grouped the species in two sections: *Euperaxilla*, where the inflorescence is an axillary spike, and *Perella*, where the flowers are solitary, isolated or grouped three by three in the leaf axils. It is this *Perella* section that we erect here as an autonomous genus. It is type *P. tetrasepala* (Linn. Fil.) and also includes *P. punctata* (Colenso), *uniflora* V. T. and *Haastii* V. T., all from New Zealand. The flower, which ends, as we know, the pedicel, has four deciduous

bracts under the ovary. To the characters already mentioned, I will only add that the leaf contains in its cortex a large number of stellate sclereids.

2. On the genus PERAXILLA. - Reduced thus to species where the flowers are arranged in a spike, the genus *Peraxilla* now includes only *P. Colensoi* (Hook. Fil.) and *decussata* (Kirk), both also from New Zealand. The spike is formed, as we know, of four lateral flowers in two crossed pairs, sessile in the axils of as many deciduous bracts, and of a fifth terminal flower, which can abort. As in *Perella*, the cortex of the leaf has stellate sclereids.

3. On the genus TREUBELLA. - Established last year (4), the genus *Traubella* whose type is *T. Forsteriana* (*Loranthus Fosterianus* Schultes), is from the Society Islands; we must add *T. vitiensis* (*L. vitiensis* Seemann), *T. insularum* (*L. insularum* A. Gray), *T. Mercieri*, a new species reported from Nouka-Hiva by M. Mercier, in 1847, and the *T. spathulata*, a new species remarkable for its small, spathulate leaves, which I found in the Museum's herbarium without certain indication of locality or collector.

These five species have in common, not only the inflorescence in an axillary cluster of biparous cymules, but also the important characteristic of having the four pollen sacs of the anthers transversely partitioned. The cortex of the leaf is there, like the outer zone of the inferior ovary, devoid of sclereids.

4. On the new genus DECAISNINA. - This genus is based on the plant collected in Timor (Koepang bay) by Leschenault, Riedlé and Guichenot, in 1803, which Decaisne wrongly identified with *Loranthus indicus* Desrousseaux (5). This last species, as I was able to ascertain from the study of the type sample kept in the Lamarck Herbarium, is a *Dendrophthoe*, and is *Dendrophthoe indicus*, or at least a closely related species, identified with it by Scheffer and which I was able to study in the Leiden Herbarium, also exists in Timor, where it was collected in Koepang, by Teijsmann.

In a previous work, before being able to disentangle this confusion, I linked this plant to the genus *Traubella*, under the name of *T. indica* (Desr.) (6). Since then, to put an end to this error, I have designated it in my notes, because of the glaucous color of its foliage, under the name of *Traubella glauca*. But, if we notice that the inflorescence is endogenous there, not exogenous, that it is a cluster of trifloral anthodia and not of biparous cymules, that the anthers have their pollen sacs there continuous and not transversely partitioned, we are led to separate today this species from the genus *Traubella* and to make it the type of a new genus. Under the name of *Decaisnina*, I dedicate it to the venerated memory of my master and friend Decaisne, to whom we owe, among so many other works, a remarkable Memoir on the Mistletoe and the first description of the flora of Timor. The plant in question will therefore now be *Decaisnina glauca*.

To this same genus are attached two other species from the bay of Koepang in Timor: one collected by Hombron in 1841, it will be the *Decaisnina Hombroni*; the other described the same year by Spanhogue, under the name of *Loranthus triflorus*, it will be *Decaisnina triflora* (Spanh.). In my previous work, I had believed, not without hesitation, to be able to identify the first species with the second, which was only known to me by description. But since then, having been able to study the *Loranthus triflorus* type of Spanhogue in the Leyden Herbarium, where it is classified under the name of *L. indicus*, I have convinced myself that they are two very distinct species. By the terminal and non-axillary arrangement of its cluster of triads, *D. triflora* even occupies a special place in the genus.

To the same genus are also attached the plant of Australia described by M. F. de Müller under the name of *Loranthus signatus* and the two neighboring forms that I have specifically distinguished under the names of *L. amplexans* and *L. Mullerianus*. In a previous Note, I incorporated these three species into the genus *Traubella* (7). But, like the Timor species just mentioned, they differ from the *Traubella* in particular by their endogenous inflorescence, composed of trifloral capitulae, and by their anthers with continuous pollen sacs. They are therefore indeed *Decaisnina*: *D. signata* (F. y. M.), *amplexans*, *Mulleriana*.

It is also to the *Decaisnina* that the plant harvested by Beccari is attached, to the Monts-Arfak, to the north of the Berau New Guinea peninsula, which I was able to study in the herbarium that he was kind enough to entrust: it will be *D. Beccari*. Finally, I found in the Leyden Herbarium, where it was classified as a variety of *Loranthus indicus*, a plant collected by M. de Vriese in Banda (one of the Moluccas), which belongs to the same genus as the previous ones, from which it differs mainly by the shape of its young twigs, which are dilated in wings in alternately rectangular planes: this will be *D. alata*.

Thus constituted, with these eight species, the genus *Decaisnina* extends, from Timor, on the one hand towards the south-east in Australia, on the other towards the north-east, by Banda, in New Guinea. It can be distinguished from *Traubella* by several characters, in particular by its leathery and more or less glaucous leaves, by its endogenous spike-like cluster and consequently sheathed at the base, by its flowers in trifloral capitulae, and by its anthers with continuous pollen sacs. Depending on whether the inflorescence is axillary or terminal, it can be divided into two sections: *Eudecaisnina*, where the cluster is axillary, comprising seven species, and *Acrodecaisnina*, where the cluster is terminal, so far containing only *D. triflora* (Spanh.).

II. ELYTRANTHEAE WITH GAMOSEPALOUS CALYX AND BASIFIXED ANTHERS FORMING THE MACROSOLENEAE SUBTRIBE.

The Macrosolenae subtribe is by far the most numerous in species. It also includes three categories. Some have only one bract under the flower. Others have three bracts under each flower, namely the mother bract and two second order lateral bracts, which are sterile. Finally, others, also provided with three sub-floral bracts, form a flower with the axil of each lateral bract and have, consequently, the inflorescence composed of triads, while it is simple in the first two cases.

Species with a single inflorescence and flowers provided with a single bract compose, according to their mode of inflorescence, two distinct genera. Sometimes the inflorescence is an axillary cluster with deciduous bracts: this is the newly established genus *Alepis*. Sometimes it is an axillary umbel with persistent bracts: it is the genus *Lysiana*, recently founded.

Species with a single inflorescence and three sub-floral bracts are attached, according to the mode of inflorescence and the structure of the stamens, to six distinct genera. If the inflorescence is a bare spike, with bracts and bracteoles longer than the ovary and short anthers with continuous pollen sacs: it is the genus *Elytranthe* of Blume. If the inflorescence is still a bare spike, but with bracts and bracteoles shorter than the ovary and long anthers with transversely partitioned pollen sacs, this is the new genus *Blumella*. If the inflorescence is a spike or an involucre head, it is the new genus *Lepidaria*. If the inflorescence is a cluster, with hexameric flowers, it is the genus *Macrosolen* by Blume; with tetramerous flowers, this is the recently established genus *Trilepidea*. If the inflorescence is an umbel, it is the new genus *Miquelina*.

Species with an inflorescence composed of triads are grouped, according to the shape of the inflorescence, into five genera. If the triads are trifloral anthodia arranged in a cluster, with a pointed ovary, it is the genus *Amylotheca*; with umbilical ovary top, this is the new genus *Arculus*. If the triads are biparous cymules arranged in an umbel, it is the genus *Aciella*; if they are biparous cymules arranged in an anthodium, it is the genus *Lepostegeres* de Blume. Finally, if the capitulate triads are arranged in an anthodium, it is the new genus *Stegastrum*. A few words about each of the thirteen genera of this subtribe.

5. On the genus ALEPIS. - Established in an earlier Note, the type of the genus *Alepis* is, as we know, *A. flavida* (*Loranthus flavidus* Hooker fil.) and also includes *A. polychroa* (*L. polychrous* Colenso), two species from New Zealand (8). To the characters already given, it should be added that the cortex of the leaf contains stellate sclereids, while the outer wall of the inferior ovary does not.

6. On the genus LYSIANA. - As defined in a previous communication (9), the genus *Lysiana* has as its type *L. Casuarinae* (*Loranthus Casuarinae* Miquel) and includes *L. linearifolia* (*L. linearifolius* Hook. Fil.), *L. Murrayi* (*L. Murrayi* Tate), *L. Exocarpi* (*L. Exocarpi* Behr), *L. vittata* (*L. vittatus* Rob. Brown mss.), all species from Australia. To the characters indicated, we must add that the cortex of the leaf is there devoid of sclereids, just as the wall of the ovary is inferior.

7. On the genus ELYTRANTHE Blume. - Established by Blume in 1830 (10) and admitted by Miguel (11), later reduced by Bentham and Hooker to the state of a single section of the genus *Loranthus* (12), this genus was again recognized as autonomous by M. Engler (13). By keeping it here, it is reduced to the species which, with a spike provided with a persistent perule in the shape of a collar at the base of the peduncle, has the mother bract and the two bracteoles longer than the ovary and covering the fruit, and at the same time anthers provided with continuous pollen sacs. Thus understood, it has as type *Elythranthe albida* Blume, Java, and includes the *E. Arnottiana* (Korthals) of Sumatra, the *E. leucosiphon* (Griffith), India, the *E. Maingayi* (Hook. fil.), From Malacca, as well as several new species collected in Java by Zollinger, in Borneo and Sumatra by Korthals, in Perak by *P. Scortechini*, in Banka by Teijsmann, etc., wrongly identified in Les Herbiers with the *E. albida*, and which will be described in my memoir.

At the level of the separation of the calyculus, which is very developed, the outer layer of the inferior ovary, which is devoid of sclereids, suddenly expands into a kind of flattened tubercle, surmounted by the style whose base persists at the top of this tubercle; so that the ovary is only partially inferior. The pistil, whose lignified cup is narrow and deep, in the shape of a glove finger, has six alternisepalous carpels and six corresponding locules, which extend into the tuberculous region and into the pyramid which surmounts it and unite only at the level where the fall of style takes place.

8. On the new genus LEPIDARIA. - This genus has for its type the plant with large leaves which M. Beccari collected in Borneo and which he distributed under the n ° 910.

The flowers are arranged there in a sessile axillary spike, provided with broad and woody bracts arranged in crossed pairs and therefore nested in four series, more than 5 cm long by 2.5 cm wide, resembling a cone quite well. From bottom to top, there are first nine or ten pairs of sterile scales, the lower three very small corresponding to the persistent perula of *Elythranthe*,

the others 2.5 cm wide and 2 centimeters wide. Then come five or six pairs of fertile scales, longer and more and more, but less wide and less and less, the last measuring 4 centimeters long and less than one centimeter wide. Each of these fertile scales bears in its axil a sessile flower, having on each side a second-order bract almost as long as the mother bract, keeled and hollowed out in a gutter; together these bracteoles completely envelop the flower.

The presence of these large sterile scales between the basal perula and the first bracts being one of the main characters of the genus, we derive for it the name of *Lepidaria* (14), and the keel shape of the two bracteoles then gives the name specific *Lepidaria bicarenata*.

We must first attach to it two other species from Borneo, collected by M. Beccari. The first (n° 1248) differs from the previous one in particular by even larger leaves, measuring about 25 centimeters long by 12 centimeters wide: it will be *Lepidaria macrophylla*.

The second (n° 2579) is distinguished because, of the ten to twelve pairs of interlocking scales, the last two alone, narrower than the others, are fertile, so that the spike is transformed into a flower head of four flowers. In addition, the two bracteoles are here concrescent behind and in front and form a sheath which envelops the flower. It will therefore be *L. vaginata*.

Next to these Borneo species, we must place that which M. Forbes collected in Sumatra (n° 2844) and which M. King described in 1887 under the name of *Loranthus Forbesii* (15).

This same genus also includes two species collected in Manila by Cuming. In the first (n° 1171), which has sessile leaves, the axis of the spike first bears two pairs of small scales at the base, then extends into a large and short internode which bears around from its top four pairs of large scales, only the last two of which are fertile here, all the upper scales form an involucre around a quadrifloral head: this will be *L. quadriflora*. In the second (n° 1174) which has petiolate leaves and whose spike also bears two kinds of scales separated by a large internode, the last two scales of the upper part are only fertile and the involucre head is consequently biflorous: it will be *L. biflora*.

This separation of the scales into two groups, whereby the species of Manila differ from those of Borneo and Sumatra, can serve to divide the genus into two sections: *Eulepidaria*, where all the scales follow each other (*L. bicarenata*, *macrophylla*, *Forbesii*) and *Chorilepidaria*, where the scales form two disjoint groups (*L. quadriflora*, *biflora*).

Thus composed, for the moment, with six species, the genus *Lepidaria* is widespread in Manila, Borneo and Sumatra, and it is with *Elytranthe* that it is most directly related. To the differential characters already indicated, we must add the ordinary abortion of two or three carpels out of six in the pistil.

9. On the new genus BLUMELLA. - Dedicated to the memory of Blume, the illustrious author of the Flora of Java, who was the first to begin for the plants of the Old World the work of grouping species into genera in the Loranthoideae, this genus is type *Loranthus loniceroides* Linnaeus from India and includes *L. psilanthus* Hook. fil., from India, *L. dianthus* King, from Peninsular Malaysia, *L. capitellatus* Wight and Arnott, from Ceylon, and several new species which I will describe in my memoir. These plants look like *Elytranthe* by the inflorescence in a spike, provided at the base with a persistent perule, and by the non-interposition of sterile scales between this perule and the first mother bracts. But they are clearly distinguished from them, firstly because the mother bract and the two bracteoles are shorter than the ovary and cover only the base, secondly and above all because the pollen sacs there are subdivided into cubicles by transverse partitions.

10. On the genus MACROSOLEN Blume. - Established by Blume in 1830 and admitted by Miguel, this genus has not been recognized since, Bentham and Hooker having considered it as a simple section of the genus *Loranthus* and M. Engler as a simple section of the genus *Elytranthe* (16). It should be reinstated. Its many described species, to which we must add several new ones, which I will characterize in my memoir, inhabit India and the various regions of the Malay archipelago. In all, the flower is hexameric.

The inflorescence, the peduncle of which is always surrounded at the base by a persistent perula of two or three pairs of small scales, is usually a raceme, which is terminal in *M. pseudoperfoliatus* Zolling. from Java, where the perula is transferred to the base of the leafy branch, everywhere else axillary (*M. sphcerocarpus* Bl., *tetragonus* Bl., etc., from Java, *M. Jackianus* Korth., etc., from Borneo, *M. macrophyllus* Korth., *Pseudoglobosus* Korth., *Melintangensis* Korth., etc., from Sumatra, *M. retusus* Jack, *trigones* Wight and Arn., *Brandisianus* Kurz, *carinatus* Wall., *viridiflorus* Wall., *Kunstleri* King, etc., from India and the Malay Peninsula, etc.). The raceme sometimes contracts its internodes and becomes umbelliform (*M. formosus* Bl., *subumbellatus* Bl., etc., from Java, *M. Lowii* King, from Perak, etc.), or it shortens its pedicels and becomes spiciform (*M. globosus* Roxb., *ampullaceus* Roxb., etc., from India). But a spiked *Macrosolen* will always be distinguished from a *Blumella* by several characters, in particular because the anthers have continuous pollen sacs there. These differences in the inflorescence allow the species to be grouped into four sections: *Eumacrosolen*, where the cluster is axillary, *Acrosolen*, where the cluster is terminal, *Actinosolen*, where the cluster tends towards the umbel, and *Stachysolen*, where it becomes an spike.

The leaf of these plants has branched sclereids in its cortex, situated in the subepidermal bed and which from there sink, dividing, into the thickness of the parenchyma. The outer zone of the inferior ovary, still devoid of sclereids, contains many large isodiametric cells, superimposed in longitudinal rows, and filled with a brown material. The lignified cup is narrow and long, like a thimble. Above the departure of the calyx, the ovary extends, more or less according to the species, in a pyramid which persists after the fall of the style. The pistil has six alternisepalous carpels, but two or three of these carpels regularly abort and there are only three or four locules, which remain distinct in the free upper part of the ovary and unite only in the style.

11. On the new genus MIQUELINA - This genus has as types *Loranthus coccineus* Reinwardt and *Macrosolen evenius* Blume, from Java, the first species having been later, under the name of *Reinwardtianus*, considered by Blume as a simple variety of the second. In memory of Miguel, the learned author of The Flora of the Dutch Indies, I will name it *Miquelina*. To *M. coccinea* (Reinw.) and *evenia* (Bl.), we must undoubtedly add *M. hypoglauca* (Kurz), from Burma, a plant that I have not yet been able to examine, certainly the plant collected at Pégu by M. Kurz and distributed under number 3892, which I will name *Miquelina Kurzii*, and also several species from India confused in the Herbaria with *Macrosolen evenius* Bl. or with *M. formosus* Bl.

Miquelina are immediately distinguished from *Macrosolen*, of which they have the hexameric flower, by their inflorescence in an axillary umbel usually bifloral, sometimes trifloral, whose peduncle is devoid of perula, but when emerging pierces the bark of the twig, which forms an irregular sheath around its base. Below the insertion of the pedicels, the cortex of the peduncle swells into a bead which extends as a tongue between the pedicels, so as to

simulate an involucre: from which we see that it is a question here of a true umbel, and not an umbelliform cluster, as in some *Macrosolen* (*M. formosus*, *Lowii*, etc.). The bract and the bracteoles are concrescent in a tridentate cup, and there are still other differential characters, which I will indicate in my Memoir.

12. On the genus TRILEPIDEA.— Defined in a previous communication (17), the genus *Trilepidea* resembles *Macrosolen* by its clustered inflorescence, provided with a persistent perula at the base; it differs from it in particular by being tetramerous, by the complete development of the pistil and by the swelling of the free part of the ovary below the style. It has so far only included two species, *T. Ralphii* and *T. Adamsii* (Cheeseman), which inhabit New Zealand. The cortex of the leaf contains numerous stellate sclereids.

13. On the genus AMYLOTHECA. - Established in a previous Note (18), this genus is characterized by its inflorescence, which is a unilateral cluster of triads, with all three flowers sessile, that is to say of trifloral anthodia. The calyx tube being quite short, it is sometimes necessary to take a close look to know if we are dealing with an *Amylothea* or a *Traubella*, whose inflorescence is, as we know, the same.

Thus defined and excluding the *Loranthus dictyophlebus* that I had attached to it first and which is an *Aciella*, as I have since shown, the genus *Amylothea* includes *A. Zollingeri* from Java, *A. sumbawensis* from Sumbawa, *A. Cumingii* from Manila, *A. Hollrungii* (Schumann) from New Guinea; we must add today at least seven new species, collected by *M. Beccari* in Celebes and the Kei and Aru islands, by *M. d'Albertis* in New Guinea, by *M. Forsten* in Célèbès, by *Gaudichaud* in Rawak, by *Ilombron* on Saint Georges Island, in the Solomon archipelago: the latter, remarkable for its narrow and long leaves, will be *A. angustifolia*.

14. On the new genus, ARCULUS. This genus has as a type a plant collected in Perak by *P. Scortechini*. It was described by *M. King* in 1887 as *Loranthus Duthieanus* and considered by him to belong to the *Dendrophthoe* section of the genus *Loranthus* (19).

The inflorescence is a pauciflorous axillary raceme, each pedicel terminating in three bracts, the concrete mother bract, and two small bracteoles, the presence of which has escaped *Mr. King's* notice. In the axils of these three bracts are born as many sessile, hexameric flowers, one or two of which can abort, which made *Mr. King* believe that the pedicels are unifloral. The leaf cortex and the outer area of the inferior ovary are devoid of sclereids. The lignified cup is narrow and long, like a thimble. The pistil develops only four of its six alternisepalous carpels, with the corresponding locules; the other two abort. After the departure of the calyx, the ovary is prolonged into a bead, in the center of which the style falls entirely, leaving in its place an umbilicus, while in all the preceding genera, notably in *Amylothea*, the style on the contrary surmounts a more or less developed persistent pyramid. It is from this circular bead that the name of the genus was taken (20), and the species in question will be *Arculus Duthieanus* (*King*).

15. On the genus ACIELLA.— Established in a previous work (21), the genus *Aciella* is distinguished first of all, as we know, by its inflorescence, which is an axillary umbel of triads with a sessile median flower, with lateral flowers pedicellate, that is to say of biparous cymules. It also differs from the *Amylothea* because the calyx tube there is much longer and because the free portion of the ovary, which persists pyramid-shaped at its top after the style has fallen, is much more developed there, the ovary often only half inferior.

It is widespread in Australia and New Caledonia. In Australia, it includes first *A. dictyophleba* (Muller) and *A. Kingiana* (22) and at least two new species hitherto confused with the *A. dictyophleba*. In New Caledonia, it is represented by the eight species defined in a previous Note: *A. pyramidata*, *Pancheri*, *lanceolata*, *rubra*, *Balansae*, *tenuifolia*, *lifuiensis* and *Deplanchei* (23).

16. On the genus LEPOSTEGERES Blume. - Founded by Blume in 1830 (24) and admitted by Miquel in 1855 (25), this genus was reduced by Bentham and Hooker to the state of section of the genus *Loranthus* (26), by M. Engler to the state of section of the genus *Elytranthe* (27). It should be restored. Its type, which has remained unique until now, is *L. gemminiflorus* Blume, from Java, of which I have been able, thanks to the kindness of M. Treub, to study samples in alcohol.

The leafy branch offers its stem a persistent seedling of three pairs of small scales. The flowering bud has eight pairs of scales, increasingly larger, nested in four longitudinal series, the last narrower than the penultimate. All these scales are sterile, minus the last four, which each bear a triad in its axil, formed of a sessile median flower and two lateral pedicellate flowers, that is to say a biparous cymule. At the top of each pedicel, we do not see, under the ovary, any trace of bract; the bracteoles therefore abort completely. In the center of the circle formed by these twelve peripheral flowers, we see two other similar triads, superimposed on the outermost pair of the four peripheral triads, that is to say on the penultimate pair of scales, without interposition of bracts; the mother bracts of these two internal triads therefore abort completely. In short, the inflorescence is a capitulum composed of six biparous cymules of hexameric flowers, with abortion of the mother bracts in the two internal cymules and of the bracteoles in all. It should be added that, of the six central flowers, it can abort two or three, so that the head, normally composed of eighteen flowers, can be reduced to fifteen or sixteen.

This regular alternation of sessile and pedicellate flowers, and later of sessile and stipitated berries, has escaped the authors, who, limiting themselves to reproducing the brief indications of Blume, say that the flowers of this plant are sessile and its fruits stipitate, without providing an explanation for this singular difference.

Thus conformed, the inflorescence of *Lepostegeres* resembles that of *Lepidaria*, studied above, in particular of *L. quadriflora*. It differs from it because the two bracteoles, sterile in *Lepidaria*, here each produce a flower. Between the *Lepostegeres* and the *Lepidaria*, there is therefore, in this respect, the same difference as between the *Aciella* and the *Macrosolen*.

The leaf cortex and the outer area of the inferior ovary are devoid of sclereids. The lignified cup is narrow and deep, like a thimble. Above the start of the calyx, the ovary extends in a pyramid, which remains adherent after the fall of the style. Of the six alternisepalous carpels it can abort one or two.

17. On the new genus STEGASTRUM. - Like *Lepostegeres*, this genus has for inflorescence a capitulum composed of triads and enveloped in an involucre, a circumstance from which its name was taken (28). But here the triads, having their three sessile flowers, are trifloral anthodia, so the fruits are always sessile.

We must first bring back the *St. bahajense* (*Loranthus bahajensis* Korthals), from Sumatra, which Beccari also collected in Borneo (n^{os} 1158 and 2026), then the *St. Beccarii* (*Lor. Beccarii* King), from Perak, which M. Beccari also reported from Borneo (n^{os} 1739 and 1171). In the Herbarium of M. Beccari, I was able to distinguish two other species, one from Borneo

(n° 537), which will be the *St. lancifolium*, the other from Celebes (n° 53), which will be *St. alveolatum*.

In these four species, as in *Lepostegeres*, the two upper pairs of scales are only fertile and produce as many triads with sessile flowers. Within the circle formed by these twelve peripheral flowers, one usually observes two other triads (*St. baltajense, alveolatum*), which brings to eighteen the number of flowers of the compound capitulum; sometimes there are four and up to six internal triads (*St. Beccarii*), and the compound head then contains from twenty-four to thirty flowers. The bracteoles of the peripheral triads and the mother bracts of the inner triads are sometimes markedly developed (*St. lancifolium*), but usually completely abort (*St. bahajense, alveolatum*, etc.).

As for the sterile scales, sometimes they follow each other in a single series, increasing regularly in size from bottom to top, to the number of five pairs in *Stegastrum lancifolium*, of eight pairs in *St. Beccarii*. Sometimes they form two distinct groups, separated by a large internode, dilated like a top: at the base, two or three pairs of small scales, at the top three pairs of large scales preceding the two pairs of fertile scales (*St. alveolatum, bahajense*). Like the *Lepidaria*, where a similar difference has already been noted, the *Stegastrum* can therefore be grouped into two sections: *Eustegastrum*, where the scales follow each other in a single series (*St. Beccarii, lancifolium*), and *Choristegastrum* where the scales are separated into two groups, one at the base, the other at the top of the short floral branch (*St. bahajense, alveolatum*).

Lepidaria and *Stegastrum* are distinguished not only by their inflorescence, but also by the conformation of the calyx. The tube is short and the sepals deeply separated; very narrow in their middle region, they widen abruptly above the point of departure of the stamens, and remain for some time contiguous at this level before falling back down there, an arrangement which is particularly clear in the *St. Beccarii*.

III. ELYTRANTHEAE WITH GAMOSEPALOUS CALYX AND DORSIFIXED ANTERS FORMING THE SUBTRIBE LOXANTHEREAE.

The Loxanthereae subtribe contains only a small number of species. The inflorescence is always a cluster of triads with three pedicellate flowers, that is to say, trifloral umbellules; they also form only one genus, *Loxanthera* of Blume.

18. On the genus LOXANTHERA Blume. - In two previous communications (29), I re-established this genus, the autonomy of which had been ignored by most authors, and I made known its remarkable floral organization, which not only assigns it a place in the tribe of the Elytrantheae, but still in fact in this group the type of a special subtribe. At the same time, I added to *L. speciosa* from Blume, which is from Java, *L. Beccarii*, which is from Borneo; since then I have seen that M. King described it in 1887 under the name of *L. lampongus*, a third species, collected by M. Forbes in Sumatra (30), and I have been able to make sure that a fourth species, so far confused with *L. speciosa*,

Without returning here to the characters of this genus, let us only recall that the young fruit is surmounted there by a large circular bead and not by a pyramid: hence a certain resemblance with the genus *Arculus*, of the Macrosolenae subtribe.

- (11) Flora van Ned. Indie, p. 832, 1855.
- (12) Genera plantarum, p. 210, 1883.
- (13) Nat. Pflanzenfam., III, 1, p. 188, 1889.
- (14) From λεπίς, scale.
- (15) Journal of the Asiat. Society of Bengal, 1AVI, p. 100, 1887.
- (16) Nat. Pflanzenfam., III, 1, p. 188, 1889.
- (17) Bull. of Soc. bot., session of January 11, 1895, p. 28.
- (18) *ibid.*, Session of April 13, 1894, p. 261.
- (19) Journ. of the Asiat. Society of Bengal, LU, p. 911, 1887.
- (20) Arculus, circular bead.
- (21) Bull. of Soc. bot., session of June 8, 1894, p. 433.
- (22) *Ibid.*, Session of February 8, 1895, p. 86.
- (23) *Ibid.*, Session of June 8, 1894, p. 433 and following.
- (24) Flora Java ?, Loranthece, p. 18, 1830.
- (25) Flora van Nederl. Indie, p. 833, 1855.
- (26) Genera, III, p. 210, 1883.
- (27) Nat. Pflanzenfamilien, III, 1, p. 189, 1889.
- (28) From στέγαστρον, cover.
- (29) Bull. of Sc. bot., sessions of April 13 and June 8, 1894.
- (30) Journal of the Asiat. Soc. of Bengal, LVI, p. 100, 1887.