

Fig. 2.

Individual flowers enlarged showing the white colour of the new type in contrast to orange-yellow of the local variety.

A specimen of the local variety of the groundnut from which the white flowered type arose has been identified by Dr. J. S. Patel, as belonging to Loureiro's *Arachis asiatica*, a synonym of *Arachis hypogaea* Lin. The white flowered type resembles the parent material from which it arose in all the plant characters except the flower colour. The following table gives the petal colours based on Ridgway's colour standard:—

Petals	White flowered plant	Local variety
Standard	Marguerite yellow	Ochraceous orange
Wing	Naphthalene yellow	Primuline yellow

The white flowered type which has been bred for three generations continues to breed true for the white colour of its flower.

It is difficult to explain at present why the two orange flowered progenies appeared from the white flowered plant or why all the progenies of that plant, white and orange, continue to breed true for their respective flower colour without any of them segregating for that character. In order to explain the possible origin of the white flowered type, crosses between the true breeding white and orange flowered progenies have been made during 1936 and are at present under investigation.

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Tadpoles of a Genus not Recorded from India.

IN 1918 the late Dr. N. Annandale described certain tadpoles obtained from the Cochin forests, which were provisionally referred by him to the family *Cystignathidae*. The pectoral girdle of a nearly adult tadpole was dissected and its resemblance to that of *Leptodactylus* was used for identifying the tadpoles with this genus. It was also pointed out that they resemble closely the tadpoles of *Heleophryne natalensis* which had been described by J. Hewitt in 1913. During the last few years, the same tadpoles were collected in the forests of the Anamalai Hills by my colleagues, and I have had an opportunity of re-examining the collection of the Cochin tadpoles through the courtesy of Dr. Baini Prashad. We have in our collection a young frog which has nearly completed its metamorphosis, though an exceedingly small stump of tail and larval mouth are still retained. I. S. Ramaswami has studied the cranial osteology of these tadpoles, and has dissected the pectoral girdle of the young frog. I am appending below a figure of this pectoral girdle and for purposes of comparison, figures of the pectoral girdles of *Hemisus* and *Breviceps* of the family *Tengystomatidae* are also reproduced from Gadow.

After re-examination of my material and comparison with the collection in the Indian Museum, I am certain that these tadpoles do not belong to the family *Cystignathidae*. The members of the latter group possess an arciferous type of pectoral girdle and *Leptodactylus* has a metasternum with a bony style. Fig. 1 is undoubtedly an example of firmisternia. Both omosternum and metasternum are wanting. The sacral diapophyses are cylindrical and not dilated into wing-like expansions. The position of these tadpoles is obviously among the firmisternia, and they are referable to the family *Ranidae* on the basis of diapophyses. This view is further supported by the osteological characters of the cranium of the tadpole which, according to Ramaswami, resemble those of *Rana hexadactyla*, *R. tigrina* and *R. fusca*. There are, however, a few features peculiar to the Anamalai tadpoles, such as the union of the infrarostral with Meckel's cartilage, the presence of a groove for the passage of a branch of the hyomandibular VII ventrally to the quaorato-cranial commissure and the absence of a pseudopterygoid process.

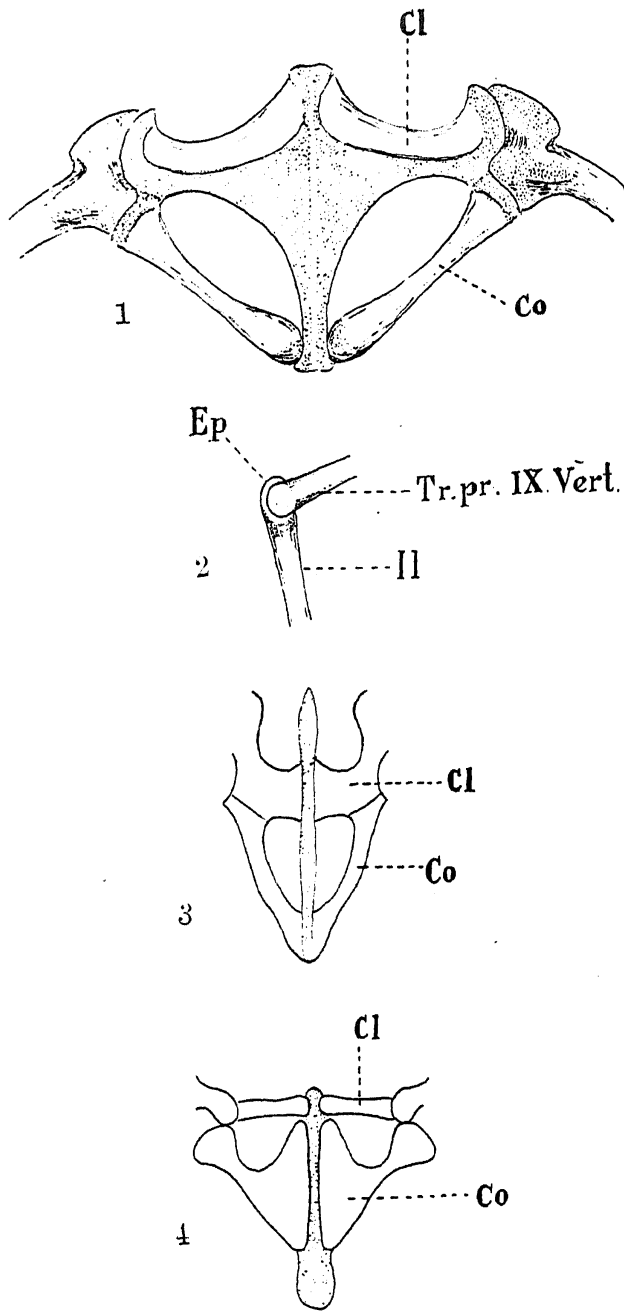


Fig. 1

1. Pectoral girdle of the young frog from Anamalai Hills, supposed to belong to the family *Cystignathidae*.
 2. Sacral diapophysis of the same.
 3 & 4. Pectoral girdle of *Hemisus* and *Breviceps* respectively from Gadow.

It will be observed that in respect of the first and the last feature, the Anamalai forms approximate the *Microhylid* example *Uperodon*. Ramaswami supports this view as a result of his examination of the entire cranial osteology of these tadpoles and I am indebted to him for numerous acts of kindness.

The pectoral girdle of the Anamalai forms differs from *Hemisus* in the absence of omosternum, and from that

of *Breviceps* in the absence of xiphisternum. It differs from the pectoral girdle of the *Ranid* group in the absence of both these elements. If the sacral diapophyses can be used as a safe diagnostic character, then this feature together with the firmisternal nature of the pectoral girdle would assign the tadpoles to the *Ranid* family, and the absence of both the sternal elements perhaps might necessitate the creation of a new genus or even a sub-family for their reception. But this must await the detailed examination of the adult forms.

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Bangalore,
 March 1, 1938.

¹ Annandale and Narayan Rao, *Proc. As. Soc. Bengal. (U.S.)*

² J. Hewitt, *Ann. Natal Mus.*, 2, p. 478.

³ H. Gadow, *Cam. Nat. Hist. Amphibia and Reptiles*, 1923, p. 25.

⁴ J. H. Power, *Trans. Roy. Soc. S. Africa*, 13, Pt. 2.

⁵ L. S. Ramaswami, *Proc. Ind. Acad. Sci.*, 2, No. 1.

⁶ M. A. Smith, *Rec. Ind. Mus.*, 26, Pt. II.

⁷ —, *Jour. Nat. Hist. Soc. Siam*, 2, No. 4.

⁸ C. G. S. De Villiers, *Ann. Trans. Mus.*, 13, Pt. III.

⁹ —, *Ann. Uni. Stellen*, 12, Sec. A, No. 2.

Lucilia sericata Meigen, in Baluchistan.

Lucilia sericata Meigen (Family Calliphoridae, order Diptera), a notorious sheep maggot fly, is a species of great economic importance. Its larvæ cause cutaneous myiasis in sheep skin and are a serious pest in Europe and Australia. From the Indian region, Patton¹ has so far recorded only two specimens of this fly, which were bred from larvæ from a case of human cutaneous myiasis at Parachinar, Kurram Valley, North-West Frontier Province. So far this fly has never been recorded from Baluchistan.

In our collection at the Fruit Experiment Station, Quetta, some specimens of this fly are present. These were collected by the writer in 1933 from a three days' old carcass of a sheep found near Gailbreth Spinny (Quetta 5,500 ft.). The identification of the species has been done by the Imperial Institute of Entomology, British Museum, London. Attempts are being made to collect data on the biology of this fly in Baluchistan.

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 March 1, 1938.

¹ *Bull. Ent. Res.*, 1922, 23, 113.