Note on a new Night-Lizard (Phelsuma grandis) *from Madagascar.*

By Dr. J. E. Gray, F.R.S.

Dark olive; chin and below white; a broad streak from the nostrils to the front of the orbit, one from orbit to orbit across the forehead, and a short longitudinal streak in front of it on the crown; four transverse rather irregular, short streaks, and six or seven unequal-sized round spots scattered in front or on the sides of them on the middle of the back. Tail reproduced, grey. Lower labial shields 5 . 1 . 5, with two small ones near the angle of the mouth, and some hexagonal plates below them. Length of body and head 4½ inches.

Hab. Madagascar. British Museum.

Cross Fertilization and the Law of Sex in Euphorbia.

By Thomas Meehan.

Mr. Charles Darwin's interesting observations on cross fertilization have opened a new world for original discovery. The list of plants which seem to avoid self-fertilization is already very large. I think *Euphorbia* may be added to the number. Certainly this is the case with *Euphorbia fulgens*, Karw. (*E. jacquiniæflora*, Hook.), which I have watched very closely in my greenhouse this winter. Several days before the stamens burst through the involucre, which closely invests them, the pistil with its ovarium on the long pedicel has protruded itself beyond, exposed its stigmatic surfaces, and received the pollen from the neighbouring flowers. The way in which the pollen scatters itself is curious. In most flowers a slight jar or a breath of wind will waft the pollen to the stigmas; but I have not been able to notice any leaving these flowers in this way; for as soon as the anther-cells burst the whole stamen falls from its filament-like pedicel and either drops at once on the pistils of other flowers or scatters its pollen-grains by the force of the fall.

This *Euphorbia* also furnishes another contribution to the theory of sex which I have advanced. The plan on which the male and female organs are formed is evidently a common one; and the only reason why some flower-heads have a pistil in the centre, and others are wholly staminate, is, that there is *greater axial vigour when the female flower is formed*. Whenever the common peduncle (below the scarlet involucre) is weak, a pistil never appears in that head of flowers. A few which seem strong also do not have them; but the great majority of the strong peduncles are those which bear the female blossoms. Another interesting fact is that the number of male flowers is less in those heads which also bear a female than in those which are wholly staminate. This seems to add to the point I made in my paper on *Ambrosia*, that after the flowers had been partially formed in embryo, and before the sex had been finally determined, the female flower, being primordially the stronger, has the power of absorbing the males or their partially formed elements into its system. It is certainly remarkable that in both these instances the number of male flowers should decrease in proportion to the existence or vigour of the central female one.

The male and female flowers of *Euphorbia fulgens* are formed