A CRUEL FLOWER.—THE BLADDER-FLOWER.

(See page 384.)

Every now and then an old plant turns up as new, as is the case with the Bladder-flower, which we had not seen for twenty-five years or more, but last year one or two florists offered it, and we now see that several have it in their catalogues. Firstly, as to its name: it is in the catalogues, and some books, as *Physianthus*, from the Greek words meaning *bladder* and *flower*, and as the plant has not, so far as we can learn, an English name, and as the majority will like it all the better if it has one, we translate the generic name. But here comes the trouble that botanists no longer call it *Physianthus*, because before it received that name, some one else had given it another, and as the oldest published name must be followed, it is properly *Arauja*, which is the name by which it is called by the savages in its South American home. It is often a great bother to fit a plant with an English name, and we cannot see why *Arauja* is not good enough, but as the majority think differently, we comply with their wishes when possible. The plant is a climber from Brazil, which has leaves and flowers of the shape shown in the engraving, the leaves being of a whitish-green or light sage color, and the flowers, which are hardly sufficiently bladder-like to warrant the name referred to, are white and fragrant. The fruit is as large as an orange, or larger; it is quite curious and ornamental, and said to be made, while young, into sweet-meats by the South Americans; the pod being very light and spongy, breaking open and showing the seeds, each of which has a tuft of beautiful silky down, like those of our Milkweeds (*Asclepias*), to the same family with which it belongs. This relationship is further shown by the copious milk-juice which the plant gives off when cut or wounded. It has long been in use as a climber, for covering the rafters of green-houses; it is hardy in the warmer parts of England, and no doubt would be so in Virginia and southward; in the Northern States it proves a useful tender climber, to be set out for the summer, it being of rapid growth, and will cover a large space, if given a rich spot. No doubt, the roots could be preserved in the cellar, though we have not tried it. When the plant grows in the open air, the flowers will be found with numerous insects—butterflies and moths—fastened to them, often a half dozen or more to a single flower. Each insect will be found securely fastened by its proboscis or trunk, in such a manner, that by all its exertions it cannot free itself. The poor things beat themselves against the flower, dusting it with the scales of their wings, and against one another, until from starvation or exhaustion they die a miserable death. We have given accounts of plants which catch insects, and feed upon them, and can see that this seeming cruelty is to a useful end—at least to the plant. Then there are other plants, which make use of insects to fertilize them, as Dr. Gray has clearly and abundantly shown. In this operation both plant and insect are benefitted, though sometimes in doing this an insect fares badly; as the honey-bee, which, in fertilizing the Milkweed, gets its legs so loaded with the mass of pollen, that if it gets to the hive, it is unable to climb up the comb, and dies; yet even here the intention is good, though the bee overdoes his part of the work. But in our *Arauja* we can find no such excuse. The flower is not fertilized by these insects, nor does the plant consume them. The contrivance for catching the moths and butterflies is as effective as if it had been designed for the special purpose, and to all appearances the plant is guilty of an act of unmitigated cruelty—catching and killing—not even that—starving to death, inoffensive insects, just for the fun of it. Certainly appearances are very much against the plant, and *Arauja* being a "barbarous name," is properly applied. When the plant was in flower, we made a sketch of the mechanism of its trap, but it is unfortunately mislaid. Suffice it to say that the anthers are so placed, that their spreading cells form a series of notches WW in a ring around the pistil. The insect, in putting its proboscis down for the honey, must pass it into one of these notches, and in attempting to withdraw it, the end is sure to be caught in a notch—boot-jack fashion, as it were—and the more the insect pulls, the tighter its trunk is drawn towards the point of the notch. Whether the insect is unable to back down its flexible trunk, the only way it can get release, or does not think to do it, we can not say, but the fact that it dosen't is very evident. As it is contrary to the natural order of things for an insect or a plant to do an act without subserving some good end, we do not think this to be an exception. An examination of the flower shows it to be so constructed that it must be fertilized by some insect, evidently by one with a proboscis of a different kind from that of our moths and butterflies. No doubt in its native home the particular insect is abundant, and all goes on well. Human intervention disarranges the whole affair, and we set out the plants where our insects, unused to this style of flower, are attracted by its abundance of honey, and are led to a miserable death, while the plant acquires a reputation for a cruelty, which it cannot avoid. An English writer, a few years ago, wrote of the flower as "diabolical," for trapping insects just "for the fun of covering itself with borrowed plumage." There is one compensation for this evil; a French writer has suggested that the plant may be turned to excellent account by the entomologist, by making it do the "bug-catching;" this is a capital idea, which we commend to our entomological friends, for to judge by the way our plant (sent by Peter Henderson) behaved last summer, we are sure that it would prove a most efficient trap for both day and night flying insects; the flowers held the largest sphinxes, or humming-bird moths, as well as those so small, that their proboscis barely reached the bottom of the flower.

LOMARIA DALGAIRNSLÆ.

(See page 384.)

This plant is a very fine greenhouse fern of arborescent character, with something the aspect of another arboreseent form of the same species known to cultivators as *lazamioides*. It has a blackish trunk, which is shaggy at the apex, with long subulate dark brown scales. The fronds are but subcoriaceous in texture, pinnate in the lower part, and pinnatified above; the pinnæ lanceolate, acute, the lower ones small, tapered to the base, but scarcely stalked, the upper ones adnate, and the uppermost decurrently confluent. Below the small basal pinnæ each edge of the stipes is set with a row of abortive ones reduced to wart-like excrescences or callosities. The color of the sterile fronds is a dark green on the upper surface, and a paler green beneath. No fertile fronds have yet been produced.

The plants to which the above description applies have been recently imported from South Africa, and are therefore to be classed as greenhouse ferns. As such they are a valuable acquisition, since they prove to be of free-growing habit, not indicating the tendency of other allied forms to dwindle away; but on the contrary, pushing their fronds with remarkable ivgor.

THE QUICKEST PASSAGE ON RECORD BETWEEN ENGLAND AND AUSTRALIA.—The *Melbourne Argus*, Sept. 3rd, says:—The fastest passage on record from London to Melbourne has been made by the Lusitania, of the Orient Line. She arrived on the 8th ult., bringing English papers of three weeks' later date than those of the previous mail. The voyage has been performed in 40 days 6½ hours, inclusive of a detention of one day and seven hours at St. Vincent, where a call was made for coal, and the total time the steamer was under way was 38 days 23 hours and 48 minutes. Some very fast steaming was done, and the average speed per day was 311½ miles, the greatest day's work being 344 miles. The Lusitania brought out 345 passengers, 68 of these being in the saloon. This quick passage of the Lusitania has excited much attention, showing, as it has done, that in the matter of steam communication *via* the Cape the colony may be better served by competition than by the subsidy of any particular line. The Lusitania goes home by the Suez Canal, which route has also been chosen for the homeward voyage of the Wampoa. It is interesting to note that, although the August mail was delivered in Melbourne a week before contract time, the time occupied between London and Melbourne was only one day less than the direct voyage of the Lusitania.

ROCK CRYSTAL seems to be growing more and more in favor amongst technical men on account of the stability of its physical properties. At the August meeting of the Bonn Society of Naturalists it was reported that the directors of the Imperial Mint of Germany have recently ordered of Herr Stern, at Oberstein, several absolutely correct normal weights made of rock crystal, which are to be used for the control of gold coins. These weights have the great advantage that it is unnecessary to determine the specificgravity of every weight, and in the case of measures to find the thermal coefficient of expansion of every measure, as both are as near constant as possible. They have been found the same in all the specimens of rock crystal yet examined, viz., specific gravity at 0° C. = 2,6506 (reduced to water at 4° C.); coefficient of expansion for 1° C., parallel to the axis, 0·00000750 inch, *i.e.*, seventy-five ten-millionths of an inch.—*Nature, xvi.*, 447.