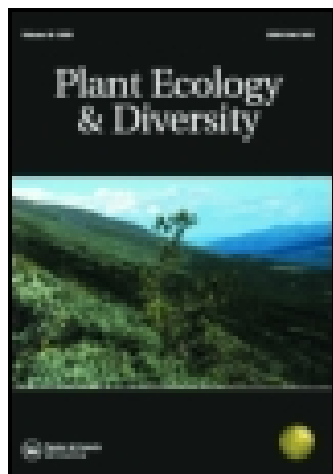


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II. Notice of a Diseased Condition of Beeches at Tynninghame, the seat of the Earl of Haddington

Professor Balfour

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each other by a marked notch, through which the stamens project. Stamens four, didynamous, much exerted, being twice the length of the corolla, in æstivation coiled up spirally and retrorsely; filaments pinkish below, pale above, inserted about the middle of the corolline tube; anthers grayish-yellow, two-lobed, introrse, attached above the base, dehiscence longitudinal. Ovary of four concrete carpels, with a central placenta, 2-4-celled, surrounded at the base by an annular disk; style apicular, long, filiform, shorter than the stamens, but longer than the corolla, becoming finally slightly curved backwards; stigma bifid. Fruit* of two, three, or four achenes, with a fleshy, rugose, bright scarlet substance resembling a one-sided aril, which is developed after the fall of the style. Cotyledons epigeal.

Mr Thomson states that the plant grows abundantly on the banks of the Old Calabar River above salt water range.

Description of Plate VII.

Fig. 1. *Clerodendron Thomsonæ* (Balf.). Showing its twining habit, oblong-ovate usually opposite leaves, short petioles, axillary panicles of cymose flowers with inflated calyx, oblique 5-lobed corolla, and exerted stamens. The figure does not show clearly the grooving of the ribs and veins on their upper surfaces.

Fig. 2. Calyx removed, and tube of corolla opened to show insertion of didynamous stamens, concrete ovary, apicular filiform style, and bifid stigma.

II. *Notice of a Diseased Condition of Beeches at Tynninghame, the seat of the Earl of Haddington.* By Professor BALFOUR.

Professor Balfour stated that he had received a letter from Dr Protheroe Smith, enclosing one from the Earl of Haddington, relative to a peculiar diseased condition of beeches at Tynninghame and Mellerstain. The letters were accompanied by specimens of a cottony matter which had appeared in large quantity on the beech stems. Dr Balfour had written to the Earl of Haddington on the subject, and had received the following reply:—"In regard to the specimens of the 'peculiar substance' which your letter relates to, I certainly am very desirous to know about it. I wish much to know whether it only appears upon trees already in a dying or failing state, or whether it destroys the tree upon which it appears. There can be no doubt that in *every case* where seen the tree dies. It is much more prevalent at Mellerstain than it is here, and very many of the beeches there are condemned. In some cases the whole of the tree is completely covered with the substance, looking at a distance as if it were painted white. In some cases, only one side of the tree is diseased. I have been told that when it once appears in a wood it spreads rapidly; and from what I have seen at Mellerstain, I have too good

* The characters of the fruit are taken from Mr Thomson's notes. The plant has not borne fruit in the Botanic Garden.

reason to believe that such is the case." He had submitted the matter for examination to Mr W. R. M'Nab, and to Mr James Hardy, Penmanshiel. Mr Hardy says—"The cottony substance sent is produced by *Coccus fagi*, Walker, List of Homopterous Insects in the British Museum, p. 1086, No. 32, with the specific character, 'yellow, elliptical, covered with white powder; length of the body two lines.' This is the second time it has come under my notice. At first I had it from Mr C. M'Intosh, then of Dalkeith, and gave an account of it in the second volume of the "North British Agriculturist." It occurs near London. Can it have been introduced from abroad with foreign beech plants? I find the cast wrapper of a caterpillar among the cotton of the *Coccus*, and formerly there was one alive concealed by it; whether it feeds on it, I cannot say, but it is not unlikely. The *Coccus* will be difficult to extirpate, for it is not easy to scrape the bark and apply hot water to a beech.

Mr W. R. M'Nab remarked that Mr M'Intosh had noticed a similar diseased condition of the beech-trees in Dalkeith Park, and had recorded the facts in the first volume of the "North British Agriculturist." He seems to have considered it a fungus. The cottony matter was at that time sent to Mr Hardy, who ascertained that it was owing to an insect, and gave a description of it in the second volume of the same journal. Mr M'Nab thinks the *Coccus fagi* appears only on trees in an unhealthy condition, or at least in situations where they are confined in their growth by close planting. Dr Balfour stated that the same species of *Coccus* had destroyed some beech-trees in the Botanic Garden, which had been planted very closely, and were hemmed in by shrubs and trees. It seems to attack healthy trees. The only remedy suggested was the application of spirit of tar or tobacco-juice. Dr Balfour remarked that the species of *Coccus* were often very destructive. One of them in 1842 destroyed the whole orange-trees in the island of Fayal, one of the Azores. The usual exportation of fruit from Fayal was 12,000 chests, but in 1842 there was not one. The insect extended its devastations to St Michael's. It was *Coccus hesperidum*. Specimens of the beech-insect and of the cottony matter were shown.

III. *Notes in Reference to the Bursting of the Spathe of Seaforthia elegans.* By Mr JOHN SADLER and Mr WILLIAM BELL.

In this communication the authors first referred to an article which had lately appeared in the "Gardener's Chronicle" from the pen of Dr Seemann, describing the bursting of a spathe of *Seaforthia elegans*, with an audible report, "almost loud enough to have proceeded from a pistol," in the Palm-House at Kew—the explosion being attributed to "a great accumulation of heat, developed by the anthers whilst inside the spathe." The authors then stated that they had had ample opportunities for observing the flowers of the *Seaforthia* in all their different stages of development in the Palm-House at the Edinburgh Botanic Garden, and as yet had never seen anything which gave the least indication of a sudden rupturing of the spathe. In some cases they had seen the old foot-stalk of the leaf which covered the spathe fall off two or three days before the spathe showed any signs of bursting; and when it did burst, it opened gradually from the base to the apex, generally on the dorsal aspect; indeed, they had only observed a single instance where the rupture occurred on the ventral side. Again, they had seen the spathe burst two or three days before the old foot-stalk fell off, and when it fell upon the floor it generally gave a pretty sharp crack, which they thought had been probably regarded as proceeding from the bursting of the spathe, as Dr Seemann states that the spathe in bursting "forced off the remnant of the old leaf-stalk." When the spathe bursts previous to the fall of the