

(3, 4) *Salpa* Forskål, 1775, und *Cyclosalpa* Blainville, 1827.—Diese beiden Genera sind durch Ihle, 1911 (Zool. Anz., v. 38, pp. 585–589) verteidigt und auch in seine Bearbeitung in "Das Tierreich" (v. 37, 1912; Siehe auch Nota p. 27, von F. E. Schulze) übergegangen. Wir glauben uns mit diesem Hinweise¹ begnügen zu können und erlauben uns noch an die gegenteiligen Aufsätze¹ von Poche (Zool. Anz., v. 32, 1907, pp. 106–109; v. 39, 1912, pp. 410–413) zu erinnern.

(5) *Appendicularia* Fol, 1874.—*Appendicularia* wurde von Chamisso & Eisenhardt, 1820 (N. Acta Ac. Leop., v. 10 (11), p. 362, t. 34 f. 4), für eine arctische, nicht erkennbare Art, aufgestellt. Fol hat 1874 (Arch. Zool. exper., v. 3, notes, p. 49) den Gattungsnamen für die tropische Art *Appendicularia sicula*, die von der arctischen sicher generisch verschieden ist, übernommen und darauf hin hat sich der Name in letzterem Sinne allgemein eingebürgert. *Appendicularia* würde anderenfalls eine Species incerta enthalten und für *Appendicularia* mit der Species *sicula* würde ein neuer Gattungsnamen aufzustellen sein. Der Name der Ordnung Appendicularidæ würde verschwinden.

(6) *Fritillaria* Fol, 1874.—Quoy & Gaimard, 1834 (Voy. Astrolabe, v. 4, p. 306) stellen den Namen Frétiliaires auf [(*Fritillaria* Huxley (1851, Philos. Trans. (London), part 2, p. 595), *Fritillaire* C. Vogt, 1854 (Mém. Inst. Genève, v. 2, no. 2, p. 74)], identifizierten ihn aber sofort mit *Oikopleura* Mertens, 1831. Um den Namen *Fritillaria* zu retten, hat Fol, 1874 (Arch. exper., v. 3, notes, p. 49) ihn in bestimmten von früherem abweichendem Sinne gebraucht, in welchem er sich vollständig eingebürgert hat. *Fritillaria* würde Synonym zu *Oikopleura* und eine Neubennennung nötig.

¹ The secretary spends an average of about six (6) hours per week in studies and correspondence for the Commission on Nomenclature, and he earnestly requests all persons to give full details with full references to every case submitted. Even slight omissions cause a loss of time. The secretary also respectfully requests that authors submit their cases in typewriting, rather than in handwriting.—C. W. S.

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SPECIAL ARTICLES

A RUST—NEW ON APPLES, PEARS AND OTHER POME FRUITS¹

For several years the writer has been studying an interesting rust on several cultivated and native species of the pome family. In 1908, the æcial stage of this rust was found on the serviceberry (*Amelanchier florida* Lindl.) and on the thornapple or haw (*Cratægus douglasii* Lindl.); later, the same rust was found on apples, pears, quinces and related fruits, as noted below. The rust on *Amelanchier florida* and *Cratægus douglasii* has been referred to *Æcidium blasdaleanum* D. & H., the telial stage, *Gymnosporangium blasdaleanum* (D. & H.) Kern., occurring on the incense cedar (*Libocedrus decurrens* Tor.).

During the past six years the writer has paid particular attention to this rust for the reason that it seems to be of considerable economic importance. While it occurs rather sparingly on practically all varieties of apples so far observed, it has been found to attack certain varieties of pears very seriously. Quinces are also subject to considerable injury by this rust. In 1910, and again in 1912, this rust was so serious in a block of Winter Nelis pears as to practically destroy 95 per cent. of the crop. The fruit was badly deformed and fully 50 per cent. of the leaves were found infected. The fruit and stems in many cases were completely covered with æcia, distortion and dropping of the fruit being the result. All varieties of pears are not equally susceptible, but both European and Oriental varieties were found affected. Oriental hybrids

¹ A preliminary paper.

also showed infection in a more or less serious degree. This rust is not roestelia-like, as in the case of the more common apple rust and other rusts whose telial stage is a Gymnosporangium. The incense cedar which bears the telial stage is very common in southern Oregon, being found on the floor of the Rogue River Valley at an altitude of 1,400 feet. The proximity of incense cedar trees to apple and pear orchards is therefore of considerable economic importance.

The hosts upon which the æcia of this rust have been found are:

Malus malus (L.) Britton (apple).

Malus floribunda Sieb. (several varieties) (flowering crab).

Pyrus communis L. (pear).

Pyrus chinensis (Oriental pear).

Pyrus sitchensis (Roem.) Piper (mountain ash).

Malus diversifolia (Bong.) Roem. (native crab apple).

Cydonia vulgaris (L.) Pers. (quince).

Cydonia japonica (Thumb.) Pers. (Japan quince).

Amelanchier florida Lindl. (serviceberry).

Crataegus douglasii Lindl. (thornapple or haw).

Culture records and final proof will be given in a detailed paper which will be published in the near future. This preliminary paper is given simply as a statement as to what has been found.

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A POSSIBLE MUTANT IN THE BELLWORT (*Oakesia sessilifolia*) WHICH PREVENTS SEED FORMATION

THE sessile-leaved bellwort (*Oakesia sessilifolia*) is used in many elementary classes in botany as a convenient type to illustrate the Lily family. The normal pistil with a single detached stamen is shown in Fig. 1, magnified three diameters. There are three stigmas terminating styles which are free at their extremities. In class material collected late in the

spring of 1912, flowers were discovered with pistils of the form shown in Fig. 2. The pistil is shorter and thicker than in normal flowers but the essential abnormality consists in the transformation of the three stigmas into func-



FIG. 1.

tional stamens, each with a pair of pollen sacs. Aside from the hermaphroditism of the pistil, the abnormal flowers do not differ in appearance from typical blossoms and bear their full quota of six normal stamens. The stigmatic anthers are well formed and filled with perfect pollen indistinguishable from that produced in typical anthers. In three per cent. grape sugar as well as in cane sugar, pollen from the two

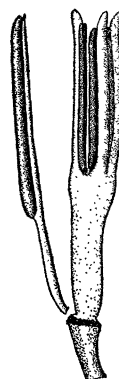


FIG. 2.

types of anthers show an equally high per cent. of germinations. Eleven attempts were made last spring to pollinate normal pistils with pollen from abnormal flowers, pollen both