

### Summary

1. Germination tests have been carried out in 32 species of Festucoideae, 6 species and 1 variety of Panicoideae and 1 species of Eragrostoideae. Seeds of most species of Festucoideae examined can germinate soon after maturity. But, in the species of Panicoideae and Eragrostoideae, the seeds do not germinate until next spring (Tab. 1).

2. Tab. 2 shows the flowering and fruiting times of grass species distributed in Hokkaido. It indicates that most species of Festucoideae flower at May—July and bear fruit at July—Aug., while in species of Panicoideae and Eragrostoideae the flowering time is laid at Aug.—Sept. and the fruiting time at Sept.—Oct.

3. The differences between subfamilies described above seem to be closely related. Panicoideae and Eragrostoideae consist mainly of tropical grasses, and they are not hardy to the low temperature. Their seeds mature at Sept.—Oct., which are close to cold winter. The delay of germination until next spring is essentially needed for the maintenance of these species in Hokkaido. On the other hand, Festucoideae mostly grow in temperate areas and are hardy. It seems favorable for festucoid grasses that the seeds germinate soon after maturity.

4. The physiological cause which brings about the delay of germination in some grass species has been discussed.

### 引用文献

- 1) Al-Aish, M. and Brown, W. V., Amer. Jour. Bot. **45**: 16 (1958). 2) Hartley, W., Aust. Jour. Agric. Res. **1**: 355 (1950). 3, 4) 中山包, 発芽生理学, 東京 (1960); 生物科学 **13**: 21 (1961). 5) Toole, E. H. and Toole, V. K., Jour. Agric. Res. **63** (1941). 6) 山田 岩男, 北海道農業試験場彙報 **67**: 58 (1954).

### ○カロリン諸島産の苔類 (水谷 正美) Masami MIZUTANI\*: A small collection of hepatics from Caroline Islands

東京都立大学理学部牧野標本館より同定依頼を受けた桜井久一博士のコレクションの中にカロリン諸島の苔類の標本が 50 点あった。この標本は 1940 年より 1941 年にかけて岡部, 近藤, 渡部の 3 氏が採集したものである。その中の 25 点は井上 (1959) に報告されている渡部氏の採集したパラオの標本の duplicate である。残りの 25 点の標本から 20 種の苔類を同定できたので報告する。

*Mastigophora diclados* (Brid.) Nees. Ponape, Aug. 20, 1941, Kondo no. 43.

*Trichocolea pluma* Mont. Ponape, Aug. 20, 1941, Kondo no. 42.

*Bazzania intermedia* (Gott. & Ldnb.) Trev. Ponape, Jan. 9, 1941, Okabe.

***Bazzania subaequitexta*** (Steph.) Mizutani, comb. nov. Syn. *Mastigobryum subaequitextum* Steph., Spec. Hepat. **3**: 483 (1908). Ponape, Aug. 20, 1941, Kondo no. 49. This species has been known only from the type (New Guinea). This is separable from the remaining species of *Bazzania* in that (1) the leaves and underleaves are closely imbricate, (2) the leaf apex is not tridentate, but denticulate, (3) the leaf base is decurrent dorsally, and (4) the underleaf is nearly entire and bordered by 1 or 2 rows of hyaline cells along margin.

*Acromastigum echinatum* (Gott.) Evans. Koror, Jan. 8, 1941, Watanabe no. 54.

*Lepidozia wallichiana* Gott. Ponape, Aug. 20, 1941, Kondo no. 50.

*Plagiochila massalongoana* Schiffn. (det. by H. Inoue). Ponape, Aug. 20, 1941, Kondo no. 48.

*Plagiochila mutabilis* DeNot. (det. by H. Inoue). Ponape, Aug. 20, 1941, Kondo no. 40.

*Saccogynidium jugatum* (Mitt.) Grolle (det. by S. Hattori). Ponape, Aug. 20, 1941, Kondo no. 46.

*Schistochila aligera* (Nees & Blume) Schiffn. (det. by S. Hattori). Ponape, Jan. 9, 1941, Okabe, Aug. 20, 1941, Kondo nos. 24, 51.

*Radula cordata* Mitt. Ponape, Aug. 20, 1941, Kondo no 42.

*R. javanica* Gott. Ponape, Jan. 9, 1941, Okabe; Yap, Jan. 1941, Okabe.

*R. loriana* Gastle. Ponape, Aug. 20, 1941, Kondo no. 41. Previously known only from New Guinea.

*Frullania nodulosa* (R., B. & N.) Nees. Ponape, Aug. 20, 1941, Kondo nos. 39, 44.

*Ptychocoleus pycnocladus* (Tayl.) Steph. Ponape, Jan. 9, 1941, Okabe.

*Lopholejeunea subfusca* (Nees) Steph. Yap, Jan. 5, 1941, Okabe.

*Cheilolejeunea intertexta* (G., L. & N.) Steph. Ponape, Jan. 9, 1941, Okabe.

*Taxilejeunea sordida* (Nees) Eifrig. Yap, Jan. 1941, Okabe.

*Hygrolejeunea latistipula* Schiffn. Tenian, Dec. 30, 1940, Okabe.

*Drepanolejeunea vesiculosa* (Mitt.) Steph. Koror, Jan. 8, 1941, Watanabe no. 56.

#### Reference

Inoue, H. 1959. Hepatics from Isl. Palau, Caroline. Journ. Jap. Bot. **34**: 267-271.

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