long, δ μ . broad, and almost colorless.

The specimens I have examined were collected on July 14, of this year Sugashima near Toba in the province of Shima.

Notes on Japanese Plants, XX.

Tomitarō Makino.

ARACEÆ. てんあんしやう科

Arisaema sikokianum Franch. et Sav. Enum. pl. Jap. II. 6 et 507. Engl. in A. DC. Monogr. Phanerog. II. 560. Iinuma Sōmoku-Dusetsu XIX. fol. 21. Nom. jap. *Yukimochisō*. ユキモチサウ

Leaf-segments 5 or 3, entire, often variegated with white colour on the upper surface. Ovary one-celled; ovules 3—4. Spadix, ripe fruits conical, with darker purple colour on the surface. Berries numerous, scarlet, roundish-obconical, sessile, one-celled; seeds ovoid, smooth, 1—2 or 3, stipitate; albumen copious; embryo cylindrical, straight.

Tosa: Sakawa-mura, Mt. Yokogura, Tadikawa-mura. (T. Makino).

β . **serratum** Makino.

Leaf-segments usually 5 or 3, with serrate or dentate-serrate-margins. Flowers and fruits similar to the typical form.

Tosa: Mt. Yokogura. (T. Makino).

HÆMODORACEÆ. そくしんらん科

Liriope minor (Ophiopogon minor) spec. nov. *Ophiopogon spicatus* Gawl. δ . *minor* Maxim. in Mél. biol. VII. 324. Franch. et Savat. Enum. jap. II. 84. Nom. jap. *Himeyaburan*. ヒメヤブラン
Tosa: Ogawa-mura, Sakawa-mura, Chōzya-mura. Tokano-mura (T. Makino.) Mushashi: Shimura-no-hara. (T. Makino.)

EXPLANATION TO THE PLATE XI. (No. 80 of this Magazine.)

(*Aldrovanda vesiculosa* L. var. *verticillata* Darwin.)

Fig. 1. Whole plants; the one bearing a flower and a fruit, and the other branching. 2. A portion with a flower. 3. A portion with a fruit. 4. Verticel of leaves. 5. Transverse section of the stem. 6. Front view of leaves. 7. Dorsal view of leaf. 8. Vertical section through the petiole. 9. Leaf with fully opened blade. 10. Transverse section of the open blade. 11. Transverse section of the closed blade. 12. Young leaf. 13. Leaf destitute of the blade; such leaves occur in the whorl directly situated under the peduncle and that situated next to it, these two whorls being often very near to each other.

14. Transverse section of the petiole of the blade-bearing leaves. 15. Transverse section of the petiole of the leaf destitute of the blade. 16. One of projections of the petiole. 17. A part of the same. 18. A portion of the surface of the stem. 19. A portion of the petiole. 20. A portion of the lower or exterior surface of the blade, with its midrib. 21. The inner part of blade-lobes in its exterior surface. 22. Their outer part in its exterior surface. 23. A portion of the upper or interior surface of blade-lobes, showing their outer part. 24. Inner or gland-bearing part of blade-lobes in its interior surface. 25. Two-armed papilla found outside the blade, petiole and stem; lateral view. 26. The same, viewed from upwards. 27. Quadrifid processes on the outer part in the inner surface of the blade, viewed from upwards. 28. Glands on the inner part in the same surface; lateral view. 29. The same, viewed from upwards. 30. Hairs on the same part. 31. Blade, laid open. 32. Tip of the midrib. 33. Infolded margin of the blade. 34. Flower with its peduncle. 35. Flower-bud with its peduncle. 36 and 37. Flowers. 38. Vertical section of the flower. 39. Sepals. 40. A portion of the same. 41. Petals. 42. Stamen seen dorsally. 43. The same seen ventrally. 44. The same seen laterally. 45. Female organ. 46. Male and female organs soon after fertilization. 47. Stigmas and apex of styles. 48. Style and stigma. 49. Vertical section of the female organ. 50. Transverse section of the ovary, 51. Anatropous ovule. 52. Floral diagram. 53. Capsule with the peduncle; sepals, petals, and styles, still unfallen. 54. Capsule. 55. Vertical section of the same. 56. The same deprived of seeds. 57. Seed. 58. The same,

from which the external layer of the testa is removed. 59. The same, with the tegmen. 60. Vertical section of the seed, with a very minute embryo and copious albumen. 61. Surface of the seed. 62. Tissue of the external layer of the testa. 63. Surface of the internal layer of the testa. 64. Structure of the same layer. 65. Tegmen. 66, 67 and 68. Embryos.

All but figs. 1 and 48. magnified.

本邦産胡頹子科植物ニ就キテ

高等師範學校教授
理學博士 齋田功太郎

胡頹子科ノ植物ハ喬木或ハ灌木ニシテ多肉ノ宿存セル花蓋ノ脚部ニ由リテ圍繞セラレタル果實ト通常銀色或ハ褐色ノ鱗トチ有スルヲ以テ容易ニ他科ノ植物ト區別セラレ得ルナリ

ベンザム及フーカー兩氏ノ「ジェネラ、プランタラム」ニ由レハ胡頹子科ニハ Elaagnus, Hippophae 及 Shepherdia ノ三屬アリトス今左ニ其簡單ナル區別ヲ掲ク

Elaagnus 屬 花ハ雌雄ノ兩蕊チ有シ、雄蕊ハ四箇アリ、葉ハ互生ス

Hippophae 屬 花ハ單性ニシテ多クハ雌花ト雄花トチ異株ニ生シ、雄蕊ハ四箇アリ、葉ハ互生ス

Shepherdia 屬 花ハ單性ニシテ雌花ト雄花トチ異株ニ生シ、雄蕊ハ八箇アリ、葉ハ對生ス

以上ノ三屬中本邦ニ産スルハ僅ニ Elaagnus ノ一屬トス而シテ此屬ニ屬スル植物ニシテ本邦ニ産スルハあきぐみ、なつぐみ、するばぐみ、あはしろぐみ及つるぐみノ五種ナリ

茲ニ予ハ本邦産胡頹子科植物チ葉ノ形態及構造ニ由リテ區別センコトヲ試ミントス

本邦産胡頹子科植物ニ就キテ