

JAPANESE BOTANY.

New Lessons in Elementary Botany (Saishin Shokubutsugakkô Kwasho). By Itô Tokutarô, Rigaku Hakushi, D.Sc., F.L.S.

OF this well got up, well illustrated, and lucidly written elementary treatise on botany the following translation of the introductory chapter or preface will give an adequate general idea.

It describes the province of botany in a manner likely to interest a young Japanese student.

"The surface of the globe we live on is covered with a varied and abundant vegetation, differing and agreeing in accordance with differences and likenesses of soil and climate. In this Japan of ours, which is a land within the temperate zone, many and beautiful are the flowers of the wild plants that blow at the various seasons of the year. In spring we have the *sakura* (wild cherry), the *yamabuki* (*Kerria*), the *tsutsuji* (azalea), the *fuji* (*wistaria*); in summer the *Ayame* (iris), the *kakitsubata* (*Iris laevigata?*), the *yuri* (lily); in autumn the *hagi* (*Lespedeza*), the *kikyô* (*Platycodon*), the *ominameshi* (*Patrinia*); in winter the *tsubaki* (*Camellia*), *sazankwa* (mountain tea-flower) and the *fukujyusô* (*Adonis amurensis*).

"Among cultivated plants we have the *ume* (plum), *momo* (peach), *Kaidô* (*Pyrus spectabilis*), *botan* (peony), *shakuyaku* (*Paeonia albiflora*), *asagaho* (morning glory), *fuyô* (*Hibiscus mutabilis*) and *kiku* (chrysanth).

"On the hill slopes grow the *matsu* (*Pinus*), *sugi* (*Cryptomeria*), *hinoki* (*Chamæcyparis*), *keyaki* (*Zelkova acuminata*), *yenoki* (*Celtis sinensis*), *Kashi* (oak), *shii* (*Q. cuspidata*), and other trees. On the wastes and moors we find *sumire* (*Viola Patrinii*), *tampopo* (*Taraxacum corniculatum*), *rengesô* (*Astragalus lotoides*), &c., among spring plants; among autumn ones, in addition to those named before, *fujibakama* (*Eupatorium chinense*), *suzuki* (*Eulalia japonica*), and others, in such abundance as to form a many coloured carpet varying according to the season spread over the land.

"In the fields and paddies grow rice, wheat, Indian corn, colza and raphanus under cultivation, the scene being diversified by scattered clumps of dark green bamboo groves. Then in the neighbourhood of temples and shrines are camphor laurels and *ichô* trees (*Gingko biloba*)—the camphor laurels are found indigenous only in China and Japan, but are cultivated elsewhere. The *ichô* is fairly common with us, and therefore not considered a curiosity, but abroad (with the exception of China) no tree resembling it is found—it is unique.

"Again, in ponds, swamps, lakes, and rivers we have *kawahone* (*Nuphar japonicum*), *juunsai* (*Brasenia peltata*), *hishi* (*Traça bispinosa*), *ukikusa* (*Lemna minor*), &c., and in the sea *arame* (*Ecklonia?*), *wakame* (*Alaria pinnatifida*), *kombu* (*Laminaria japonica*), *asakusanori* (a kind of laver), &c.

"On our high mountains only grow such plants as *kokemomo* (*Vaccinium* sp.), *ihôme* (*Blyxa* sp.?), *gankôran* (*Empetrum nigrum*), &c., also such plants as *yashi* (*Cocos nucifera*, but this may be a mistake),

hego (sp. of tree fern *Cyathea*), &c., of Asiatic and Malayan character, others of Mexican and American affinities, such as *saboten* (cactus), *riuzetsuran* (various parasitic orchids), &c., even Australian forms, such as *Acacia* and *Eucalyptus* (but these, of course, introduced).

"Our indigenous species of trees, shrubs and herbs, including cryptogams, are very numerous; in addition, among botanical forms we must count the innumerable microscopic organisms found in a drop of water or in mouldy rice.

"Some 140 years ago scarcely 10,000 species (of phanerogams and cryptogams?) were known to science; now more than 175,000 are known to flourish on our globe, and to be thus denizens of the province of botany."

The illustrations are extremely good, and many of them apparently original. Among the best are those of the hydrangea (*ajisai*), *Vicia faba* (*soramame*), the fruit of chestnut (*Kuri*), section of plum-fruit, wood of wild cherry and of *shuro* (*Trachycarpus*), the figure of a potato plant (*jagatara-imo*), dissection of iris flower, mistletoe on *Celtis*, &c. There are, in addition, two very finely coloured plates, both of gorges among the Nikko Hills, one—the frontispiece—showing, ingeniously enough, on its guard-fly leaf the outline figures with the names of the principal plants in the rich mass depicted in the chromo. Unfortunately, of the Japanese names given, only one or two can be identified in any books at my command. It is worth notice how large a proportion of the names of even common plants is Chinese.

Dr. Itô may be congratulated on the production of so excellent, indeed charming, an introduction to the study of that most fascinating of sciences, botany.¹

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OUR UNIQUE EARTH!

Man's Place in the Universe. By Alfred R. Wallace, LL.D., D.C.L., F.R.S., &c. Pp. xi + 330. (London: Chapman and Hall, Ltd., 1903.) Price 12s. 6d.

A BOOK from the pen of so distinguished a man as Dr. Alfred Russel Wallace would naturally find many readers, but the present volume, dealing with a subject of such general interest, will undoubtedly be widely distributed.

This work is the outcome of an article which Dr. Wallace published some time ago, and the interest it excited spurred him on to bring together in book form in a more elaborate and detailed manner the arguments on which the subject-matter was based.

The reader, therefore, has now before him the whole of the evidence upon which the author claims certain conclusions, which have "enormous probabilities in their favour," namely, "that no other planet in the solar system than our earth is inhabited or habitable," "that the probabilities are almost as great against any other sun possessing inhabited planets," and "that the nearly central position of our sun is probably a permanent one, and has been specially favourable,

¹ I am not sure of the accuracy of the above given botanical equivalents.