The writer believes that the probable cause of the mammato-cumulus is to be found in a descending air movement, which, however, in view of its usually being very limited in area, seldom reaches down to the lowest air strata.

BIRD MIGRATION AND WEATHER IN HUNGARY.

THE spring dates of arrival in Hungary of migrating birds have been studied in relation to weather conditions for the period 1894–1903, by J. Hegyfoky, who presents the general results in the September number of the *Meteorologische Zeitschrift*. Weather which is warm and pleasant accelerates the arrival of the birds, while unpleasant cool weather delays their coming. When high pressures prevail over the continent the arrival is regular, but when depressions, of short duration, occur, the arrival is irregular.

NOTES.

J. R. SUTTON, meteorologist of the De Beers Consolidated Mines at Kimberley, continues his valuable discussions of the meteorology of the South African table-land in a paper on 'The Climate of East London, Cape Colony' (*Trans. So. Afr. Phil. Soc.*, XVI., 3, August, 1906).

R. DEC. WARD.

BOTANICAL NOTES.

PAPERS ON FUNGI.

Two years ago Dr. G. P. Clinton, of the Connecticut Experiment Station, published a very helpful monograph of the North American *Ustilagineae* (*Proc. Boston Society Nat. Hist.*, Vol. 31) which was noticed in this journal (SCIENCE, July 7, 1905). The same author has published another paper on the same group of plants, but for a restricted area under the title, 'The Ustilagineae, or Smuts, of Connecticut.' It constitutes Bulletin No. 3 of the State Geological and Natural History Survey, and includes forty-four pages of text and seven full-page plates. There is first an introduction of seven pages in which the general characters, life history and economic importance of the smuts are discussed, and this is followed by a systematic key to the genera, of which there are twelve represented by species in the state. Under each genus, after its characterization there is a key to the species with the specific descriptions clearly drawn. No synonyms are included, but hosts and localities are given with much fulness. In all, forty-nine species and one variety are described. The plates (mostly half-tones) add much to the usefulness of the paper.

In 'A Preliminary Report of the Hymeniales of Connecticut' Professor Edward A. White published (in Bulletin 3 of the State Geol. and Nat. Hist. Survey) the results of his studies of the larger fungi (mainly toadstools and pore-fungi) of Connecticut. It constitutes a thick pamphlet of eighty-two pages of text, and forty excellent half-tone plates of photographs. As stated in the preface, the author's aim 'has been to compile as far as possible a complete and accurate list of native species, together with notes regarding the characteristic genera.' This plan has been so carried out that one finds here clear, non-technical descriptions of fifty-five genera, aided by the very good plates, and following each generic characterization is a list of the species with localities and notes in regard to edibility. There are enumerated of *Agaricaceae* 233 species, *Polyporaceae* 103, *Hydnaceae* 23, *Thelephoraceae* 18 and *Clavariaceae* 11. This pamphlet should prove useful to beginners in the study of the larger fungi in Connecticut, as by it the genus of any specimen can be determined, and that is all that the beginner should attempt. The identification of species may well be deferred until genera are pretty well fixed in mind.

Professor Doctor Arthur contributes to the volume 'Resultats scientifiques de Congrès international de Botanique Vienne 1905' a paper on the classification of the *Uredineae* based upon their structure and development ('Eine auf die Struktur und Entwicklungsgeschichte begründete Klassifikation der Uredineen'), in which he proposed an entirely new arrangement of the group. He divides the order *Uredinales* into three families, viz., *Coleosporaceae*, with seven genera (*e. g.*, *Coleosporium*, *Chrysospora*, etc.) representing three subfamilies; *Uredinaceae*, with twenty-

two genera (*e. g., Pucciniastrum, Chrysomyxa, Uredo, Cronartium, Endophyllum,* etc.) representing four subfamilies; and *Aecidiaceae,* with thirty-five genera (*e. g., Ravenelia, Uropyxis, Phragmidium, Aecidium* (*Gymnosporangium*), *Dicaeoma,* etc.) representing five subfamilies. The old genus *Uromyces* is split into *Nigredo, Uromycopsis, Klebahnia* and *Telospora,* while *Puccinia* is split into *Dicaeoma, Allodus, Bullaria* and *Dasyspora.* We hope to present a fuller account of this interesting study in the near future.

Dr. Arthur and F. D. Kern have published (in *Bull. Torr. Bot. Club,* vol. 33) a paper on the 'North American Species of *Peridermium,*' of form-genus of *Uredineae* inhabiting conifers. The authors distribute the species of *Peridermium* among the following actual genera: *Coleosporium* and *Cronartium* (on *Pinus*), *Pucciniastrum* and *Calyptospora* (on *Abies, Tsuga* and *Ephedra*), *Melampsorella* and *Melampsoridium* (on *Abies* and *Larix*) and '*Chrysomyxa*' (on *Picea* and *Abies*).

CALIFORNIA TREES.

About a year ago Alice Eastwood issued 'A Handbook of the Trees of California' as one of the 'Occasional Papers' (IX.) of the California Academy of Sciences. In a thick pamphlet of 86 pages and 57 plates she has given such a popular account of the trees of California as must prove of great use to the botanical students of the Pacific coast. It will be useful also to botanists elsewhere, since it brings together in convenient form the names and descriptions of the trees known to be native of that region. In all, the author includes 134 species, of which 42 are Gymnosperms. There is but one species of palm and two Yuccas. Of other common genera there are of willows (*Salix*) 11 species, *Populus* 3, *Juglans* 1, *Betula* 1, *Alnus* 3, *Quercus* 13, *Celtis* 1, *Crataegus* 2, *Acer* 4 and *Fraxinus* 3. The state has no native elms, magnolias, lindens, beeches, hickories, chestnuts, persimmons, nor mulberries, but it has in the Madroño (*Arbutus menziesii*) and the California laurel (*Umbellularia californica*) two most interesting trees which go far towards making up for the loss of the former.

An especial interest attaches to this volume because it is one of the last issued by the California Academy of Sciences before its destruction by earthquake and fire, and still more because of the heroism of the author (who is also the botanical curator) through whose faithfulness and bravery some of the collections were saved. Such great devotion to duty, and entire indifference to personal danger as she displayed in the most terrifying experiences compel our highest admiration.

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DEGREES CONFERRED BY THE UNIVERSITY OF ABERDEEN.

Among the large number of doctorates of law conferred by the University of Aberdeen on the occasion of its recent quatercentenary, *Nature* selects the following as especially concerned with science:

Richard Anschutz, professor of chemistry, Bonn; Henri Becquerel, professor of physics, Paris; Sir James Crichton-Browne, Kt., Lord Chancelor's visitor in lunacy; Casimir de Candolle, Geneva; Frank Wigglesworth Clarke, chief chemist, U. S. Geological Survey, Washington; Yves Delage, professor of zoology and comparative anatomy, Paris; J. Deniker, librarian of the Museum of Natural History, Paris; W. Einthoven, professor of physiology, Leyden; Herbert Mackay Ellis, director-general, Naval Medical Service, London; Arthur J. Evans, keeper of the Ashmolean Museum, Oxford; Andrew Russell Forsyth, Sadlerian professor of pure mathematics, Cambridge; Sir Archibald Geikie, secretary to Royal Society; Arnold Hague, U. S. Geological Survey, Washington; H. J. Hamburger, professor of physiology, Groningen; Edward Hjelt, professor of chemistry, Helsingfors; Harald Höffding, professor of philosophy, Copenhagen; Ferdinand Hueppe, professor of hygiene, Prague; Howard A. Kelly, professor of gynecology, Johns Hopkins University, Baltimore; Surgeon-General Sir Alfred Keogh, K.C.B., director-general, Army Medical Service; Rudolf E. Kobert, professor of pharmacology,