

the only Fungi that make mycotoxins in hyphal stage, etc. Here is a ripe field of study remaining unploughed, waiting for the ecologist–evolutionary biologist to mine through the mountain of data and experiments accumulating about mycotoxins; it is my bet that such an endeavour will pay off handsomely for both the medical and the ecological worlds.

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**Geomedical Aspects in Present and Future Research**, Edited by JUL LÅG. Norwegian Academy of Science and Letters, Universitetsforlaget, Oslo–Bergen–Tromsø, Norway: 226 pp., figs & tables, 22.4 × 16.2 × 1.7 cm, [no price indicated], 1980.

This book is a compilation of the scientific papers presented at an Internordic Geomedical Symposium which was held at the Norwegian Academy of Science and Letters in Oslo during 22–23 May 1978. More than 60 medical and other scientists participated, a list of their names and addresses being given at the end of the book, while in the Preface is an outline of the steps that were taken to organize and finance this Symposium, as well as an indication of the objectives that the organizers had in mind. Apart from these items and a table of Contents, the book consists of 23 articles, each written in a concise way on a relevant subject related to geomedicine.

In his leading article the Editor, an eminent pedologist who is Scientific President of the Norwegian Academy, indicates that: 'geomedicine may be defined as the science dealing with the ordinary environmental factors influencing the geographical distribution of pathological and nutritional problems relating to human and animal health'. He then gives a purview of geomedical problems, citing examples from investigations conducted in Norway, that involve relationships between certain endemic human diseases and the lack or excess of particular trace-elements in the soil. Professor Låg admits, however, that the subject as defined is a widely comprehensive one, and suggests its subdivision, giving as an example that 'when the geomedical problems are connected to the water supply, the expression hydro-geomedicine may be used'.

The articles presented in this book reflect the multi-disciplinary nature of the contributors, as some of them deal exclusively with soil surveys for traces of heavy-metals—including iron, manganese, zinc, antimony, and copper—whereas others deal exclusively with surveys and statistical data concerning the distribution of certain human diseases. A third category was presented by what I would like to call environmental epidemiologists, who could show the correlation between the geographical distribution of human diseases—such as malignant tumors, cardiovascular diseases, multiple sclerosis, or Gaucher's disease—and the distribution of traces of heavy-metals 'and other elements in the soil humus'.

The concentration of these elements, we are told, can occur naturally, or may be effected by pollution, by volcanic ashes, by means of sea-water, or (as in the case of selenium) by aerial precipitation. The elements reach Man through his consumption of water or salt, or through vegetable and meat diets. One is impressed with the very sophisticated technology that went into making

the soil surveys for traces of particular minerals, as well as in estimating the traces of elements such as copper, zinc, nickel, iron, mercury, selenium, arsenic, and antimony, in the human sera of various communities in Norway.

It would not be proper to attempt to review individually the articles presented in this book. Each is apt to be a concise scientific exposé presenting statistical data, or speculating on a geomedical problem with epidemiological insight—complete with citation of a usually extensive bibliography appended to each article, and sometimes reaching nearly 100 references. There is, however, some unevenness in the manner of referencing (which is sometimes done by numbers in parentheses), while authors whose surnames begin with Scandinavian letters such as 'Å' or 'Ø', or even *may* do so (but have alternatives such as 'Aa' or 'Oe', respectively), are apt to find themselves at the end of the list—though a larger grumble is the lack of any index. But these are minor items that could easily be remedied in future works such as one hopes will follow in this general style and impressive quality.

This well-produced book will certainly arouse the interest of environmentalists, medical epidemiologists, agronomists, and veterinarians, on the geomedical aspects of certain human diseases. Moreover, the multi-disciplinary approach in investigating geomedical problems, and the contributions of various authors of often different but linked nationalities, will stress the need for furthering international cooperation and interdisciplinary joint endeavours in this field.

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**Assignment: Wildlife**, by ANNE LaBASTILLE. E. P. Dutton, New York, NY: xiii + 243 pp., illustr., 20.5 × 13.5 × 3 cm, \$11.95, 1980.

Dr Anne LaBastille, winner of the 1974 Gold Medal for Conservationist of the Year awarded by the World Wildlife Fund, achieved deserved success with her first autobiographical book, *Woodswoman*, for which demand was so sustained that it subsequently appeared in several editions, including paperback format. Now she has done it again, with an admirable follow-up book, that describes her activities, as a scientist and conservationist, in foreign fields. She describes how her assignments have led her to Guatemala and parts of the Caribbean, to Amazonia and other sectors of South America, and several other parts of the tropical world. A spinoff consequence of her travels has been a series of writings, both professional and popular, that have enhanced the conservation cause. This book is an illustrious instance, written with upheld spirit as well as detailed documentation of the save-wildlife challenges that Dr LaBastille has encountered in the past 10 years. To her must go credit for setting up a pragmatic campaign to save the flightless Atilán Grebe (*Podilymbus gigas*) after its habitat was threatened with disruptive development. That she knows how to win over local officials in Central America is demonstrated by the name accorded to her, of 'Mama Quetzal'.

It all makes entertaining and informative reading. True, those who may be expecting ecological analyses