

published elsewhere. "L'Hygiène sociale" embodies a series of lectures given at the École des hautes Études sociales, in which he points out forcibly that the development of our knowledge regarding the causation of disease has devolved upon us new responsibilities as individual citizens, and in which he advocates an intelligent propagandism rather than legal insistence.

On one occasion Duclaux felt himself constrained to leave the peaceful search after truth which he had been pursuing all his life in his laboratories, and to enter upon the turmoil of the public platform. This was on the occasion of the Dreyfus case, when, thinking the cause of truth was imperilled, he, with complete disregard of all personal considerations, and, as it happened, with most disastrous consequences to his health, threw himself into that fierce struggle with invincible ardour. He, with Zola, Grimaux, and some other *intellectuels*, founded the Ligue des Droits de l'Homme, and it was whilst addressing a meeting of this League that he was seized with an attack of apoplexy. He made a slow recovery, and regained sufficient health to resume his work at the Institute, but has now succumbed to a second seizure from which he never regained consciousness.

Owing to the versatility of his genius and the wide field of scientific subjects which occupied his attention during a very active life, it is difficult to form an adequate estimate of the importance of his scientific work. It will be, perhaps, on account of his researches into the ferments and the chemical processes associated with the life and activities of micro-organisms that he will be best remembered by the world of science; but for those who have had the privilege of being his pupils and associates it will be the memory of the kindly guide and critic, whose enthusiasm was a continual spur to effort, and whose ideas were ungrudgingly at the disposal of every disinterested inquirer into truth, that will remain for ever foremost.

CHARLES J. MARTIN.

SIR H. M. STANLEY.

THE death of Sir H. M. Stanley on Tuesday, at sixty-three years of age, deprives the world of a man of action, and geography of one of its greatest pioneer explorers. It can truly be said that he changed the map of Africa by the results of his expeditions, and his picturesque narratives created public interest in the problems of African exploration.

Stanley's adventures in Central Africa while engaged in the search for Livingstone attracted great attention, and his famous book, "How I Found Livingstone," in which the expedition is described, has become a classic work of travel. Commissioned to find Livingstone, of whom nothing had been heard for two years, Stanley reached Zanzibar in January, 1871, and on November 10 of the same year met the explorer at Ujiji, on Lake Tanganyika, where Livingstone had just arrived from Nyangwe. The two travellers explored together the north end of Tanganyika, and proved conclusively that the river Rusizi flowed into and not out of the lake, and that Tanganyika had no connection with the Nile system. In February, 1872, Livingstone started on the journey from which he never returned, and Stanley made his way back to Europe.

In 1874, Stanley left England for the expedition to Central Africa which has immortalised him. The writer of the obituary notice in the *Times*, from which some of the particulars here given have been derived, points out that little more than the position of Victoria Nyanza was then known; its shape was all wrong; our knowledge of Albert Nyanza was incomplete; Lake Tanganyika was imperfectly defined; and nothing was known of the region that lies between Lakes Albert and Tanganyika. Stanley's expedition changed all that. He

proceeded from Bagamoyo west and north to Victoria Nyanza, tracing a river which he believed (erroneously, we now know) was the remote source of the Nile. He circumnavigated the lake, and for the first time proved to satisfaction that it was one great lake and not a group of small lakes, and that its shape was very different from that laid down in Livingstone's map. Westwards to Muta Nzige, as Lake Albert is called by the natives, Stanley and his great following marched. They struck a bay (Beatrice Gulf), which is now recognised as part of a southern lake, afterwards named by Stanley Lake Albert Edward. Important rectifications and additions were made in the country lying between Victoria Nyanza and the lakes to the west, and thence south to Ujiji. Stanley circumnavigated Tanganyika, rectifying its contour, and proving conclusively that the lake had an outlet in the river Lukuga.

Leaving Nyangwe in November, 1876, Stanley reached Boma, near the mouth of the Congo, in August, 1877. This journey across Africa lasted two years and nine months. The results to geography were certainly immense; it is doubtful if on any other single expedition so much had been done to fill up the great blank in the map of Africa. The narrative of this expedition was given by Stanley in "Through the Dark Continent."

The magnitude of Stanley's discovery we are only now realising, when the multitude of mighty tributaries north and south are being opened up, and we are able to form an estimate of the vast basin of the Congo.

Stanley had scarcely landed in Europe, in 1878, when the King of the Belgians solicited his aid in the opening up of the Congo. In the following year he returned to the Congo; and this was the beginning of what really soon became the Congo Free State, under the sovereignty of the King of the Belgians.

In 1887, Stanley went again to Africa—this time in search of Emin Pasha. Emin was found, but the expedition met with several disasters. Finally, marching through new country, exploring the Semliki River, Mount Ruwenzori, and Lake Albert Edward, Stanley and his followers made their way by the south of the Victoria Nyanza to the coast, he reaching Zanzibar on December 6, 1888, leaving Emin behind on the mainland.

On this expedition Stanley succeeded in solving some important problems in the hydrography of Africa and adding much to our knowledge of its geography. Among the geographical results were the discovery of the Semliki River, which issues from Lake Albert Edward and enters the south end of Lake Albert Nyanza, the Ruwenzori range between these two lakes, and the south-western extension of Lake Victoria. The results of this expedition are described in the volume "In Darkest Africa."

Stanley has been termed "the Bismark of African exploration," and in many respects the comparison is not inappropriate; for the work he accomplished united into one great whole the *dissecta membra* of African exploration, and it was carried out with firm nerve and unflinching will.

INTERNATIONAL ASSOCIATION OF ACADEMIES.

THE following is a list of the delegates who, according to the latest advices, will attend the General Assembly of the International Association of Academies, to be held at the Royal Society's Rooms at Whitsuntide:—

Amsterdam.—Koninklijke Akademie van Wetenschappen, Prof. H. G. van de Sande Bakhuyzen and Prof. M. J. de Goeje. *Berlin*.—Kgl. Preussische Akademie der Wissenschaften, Prof. H. Diels, Prof. W. Waldeyer, Prof. W. von Bezold and Prof. R. Pischel. *Brussels*.—Académie

Royale des Sciences, Prof. Léon Fredericq and Prof. Chevalier Edouard Descamps. *Budapest*.—Magyar Tudományos Akadémia, M. Charles Than and M. Ignatius Goldziher. *Christiania*.—Videnskabs Selskabet, Prof. H. Mohn and Prof. G. Guldberg. *Copenhagen*.—Kongelige Danske Videnskaberne Selskab, Prof. J. L. Heiberg and Herr Paulsen. *Göttingen*.—Königliche Gesellschaft der Wissenschaften, Prof. E. Ehlers, Prof. F. Leo, Prof. F. Kielhorn and Prof. E. Riecke. *Leipzig*.—Kgl. Sächsische Gesellschaft der Wissenschaften, Prof. Dr. Flechsig and Prof. Dr. Credner. *London*.—Royal Society, Sir William Huggins, Mr. A. B. Kempe, Prof. Larmor, Mr. Francis Darwin, Sir Michael Foster, Lord Kelvin, Prof. Armstrong, Mr. George Darwin, Prof. Forsyth, Sir David Gill, Prof. Liversidge, Sir Norman Lockyer, K.C.B., Prof. Schuster, Dr. Waller, Sir William Ramsay, K.C.B., Mr. Bateson and Prof. Milne. *London*.—The British Academy for the Promotion of Historical, Philosophical, and Philological Studies, Lord Reay, Right Hon. James Bryce, Sir R. C. Jebb, Dr. Caird, Sir C. P. Ilbert, K.C.S.I., Right Hon. Sir A. Lyall, G.C.I.E., K.C.B., and Prof. Rhys Davids. *Madrid*.—Real Academia de Ciencias, Señor José Echegaray and Prof. Santiago Ramon y Cajal. *Munich*.—Kgl. Bayerische Akademie der Wissenschaften, Prof. Ferdinand Lindemann and Prof. Karl Krumbacher. *Paris*.—Académie des Inscriptions et Belles Lettres, M. Georges Perrot, M. Emile Senart, M. le Comte de Lasteyrie, M. H. Omont, M. M. Collignon and M. J. Lair. *Paris*.—Académie des Sciences, M. Mascart, M. Gaston Darboux, M. Henri Poincaré, M. H. Moissan, M. A. de Lapparent and M. A. Giard. *Paris*.—Académie des Sciences Morales et Politiques, M. Georges Picot, M. Paul Leroy-Beaulieu, M. Glasson, M. le Comte de Franqueville, M. Boutroux, M. le Baron de Courcel, M. Henri Joly and M. Paul Meyer. *Rome*.—R. Accademia dei Lincei, Prof. Giacomo Ciamician and Count Ugo Balzani. *St. Petersburg*.—Académie Impériale des Sciences, Mrs. A. S. Famintzin and Prof. C. H. Salemann. *Stockholm*.—Kongl. Vetenskaps Akademien, Prof. G. Retzius and Prof. S. E. Henschen. *Vienna*.—Kaiserliche Akademie der Wissenschaften: A.—Mathematisch-naturwissenschaftliche Klasse, Prof. Viktor von Lang, Prof. Sigmund Exner, Dr. Edmund Mojsisovics, Edler von Mojsvar, and Prof. Heinrich Obersteiner. B.—Philosophisch-historische Klasse, Prof. Theodor Gomperz, Prof. Joseph Karabacek and Prof. Leopold von Schroeder. *Washington*.—National Academy of Sciences: Its foreign members—Sir Archibald Geikie and Prof. E. Ray Lankester.

NOTES.

THE following candidates selected by the council of the Royal Society were duly elected at the meeting on Thursday last, May 5:—Dr. T. G. Brodie, Major S. G. Burrard, Prof. A. C. Dixon, Prof. J. J. Dobbie, Mr. T. H. Holland, Prof. C. J. Joly, Dr. Hugh Marshall, Mr. Edward Meyrick, Dr. Alexander Muirhead, Dr. G. H. F. Nuttall, Mr. A. E. Shipley, Prof. M. W. Travers, Mr. Harold Wager, Mr. G. T. Walker, and Prof. W. W. Watts.

AN influential committee has been formed for the purpose of striking a medal in honour of the memory of the late Prof. Cornu. The committee includes many members, foreign associates and correspondants of the Institute of France, as well as other leaders in the scientific world. The medal will be in bronze, silver bronze and silver, and the price will be 15 francs, 20 francs, and 50 francs respectively. Subscribers for the medal are invited to send their subscriptions to M. E. A. Martel, 8 rue Ménars, 2^e Arrondissement, Paris.

AT its meeting on Monday, May 9, the Academy of Sciences of Paris elected Prof. Barrois, of Lille, to fill the vacancy left in the section of mineralogy by the death of the illustrious Fouqué. This recognition of the claims of one of the most distinguished geologists of the present day

will be welcomed far and wide, and nowhere more warmly than in the British Isles, where M. Barrois has many attached personal friends, and where he has himself done so much to illustrate the geology of this country.

As was generally expected, Prof. Rothpletz has been appointed to the chair of geology in the university at Munich and to the directorship of the State geological collections—the posts left vacant by the death of the lamented K. von Zittel. He has long been connected with the university, and has gained a wide reputation as an accomplished field geologist and a good palaeontologist. His researches into the tectonics of the Alps have attracted much attention in this country, where he has many personal friends, and where he has made many geological excursions.

AT a meeting of the U.S. National Academy of Sciences on April 21, Sir William Ramsay, K.C.B., was elected a foreign associate of the academy.

A REUTER message from Cape Town reports the arrival there of the steam yacht *Scotia*—the vessel in which the Scottish Antarctic Expedition sailed.

THE death is announced of Mr. Eli Sowerbutts, who for the last twenty years had acted as secretary of the Manchester Geographical Society, which he was largely instrumental in founding. Mr. Sowerbutts was in his seventieth year.

PROF. ÉMILE BOURQUELOT, of Paris, Sir Henry Littlejohn, and Dr. J. Wilson Swan, F.R.S., have been elected honorary members of the Pharmaceutical Society of Great Britain. The following have been elected corresponding members of the society:—Prof. E. Perrot, Paris; Prof. Heinrich Beckurts, Brunswick; Prof. Carl Hartwich, Zürich; Mr. S. T. Dunn, of the Hong Kong Botanical Gardens; and Dr. G. W. Parker, British Guiana.

THE following have been elected honorary members of the Royal Institution:—Prof. E. H. Amagat, Prof. L. P. Cailletet, Prof. J. M. Crafts, Prof. H. A. Lorentz, Prof. E. W. Morley, Prof. E. C. Pickering, Prof. and Madame Curie, Prof. H. L. Le Chatelier, Prof. G. Lippmann, Prof. J. W. Bruhl, Prof. G. H. Quincke, Prof. E. Fischer, Prof. F. W. G. Kohlrausch, Prof. H. Landolt, Prof. L. Boltzmann, Dr. H. Kamerlingh Onnes, Dr. G. Lunge, Prof. P. T. Cleve and Prof. P. Zeemann.

PROF. VAN 'T HOFF offers through the medium of the *Zeitschrift für physikalische Chemie* a prize of 60*l.* for the best and most complete synopsis of the literature of catalytic phenomena. Competitors are required to send in their papers before June 30, 1905, to the editors of the *Zeitschrift*, 2 Linnéstrasse, Leipzig, and the judges are Profs. van 't Hoff, Arrhenius and Ostwald.

AN international congress on philosophy has been arranged to take place at Geneva from September 4 to 8 under M. Ernest Naville as honorary president and Prof. Gouraud as acting president. The languages used will be English, French, German and Italian. The congress will be divided into five sections, dealing with history of philosophy, general philosophy and psychology, applied philosophy, philosophy of the sciences, and history of science. The secretary is Dr. Ed. Claparède, 11 Champel, Geneva.

THE British Fire Prevention Committee offers a gold medal and a purse of 20*l.* for the best fable for children calculated to serve as a warning against the danger of