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Source: *Taxon*, Vol. 6, No. 4 (May, 1957), pp. 89-101

Published by: International Association for Plant Taxonomy (IAPT)

Stable URL: <http://www.jstor.org/stable/1217752>

Accessed: 13/08/2010 09:55

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*Official News Bulletin of the International Association for Plant Taxonomy, Edited and Published for I.A.P.T. by the International Bureau for Plant Taxonomy and Nomenclature, 106 Lange Nieuwstraat, Utrecht, Netherlands*

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## ELMER DREW MERRILL - AN APPRECIATION

Richard Evans Schultes

*(Botanical Museum of Harvard University, Cambridge, Mass.)*

It was a year ago that Elmer D. Merrill,\* Arnold Professor of Botany Emeritus of Harvard University and former Director of the Arnold Arboretum, passed away after a lingering and weakening illness. As the realisation that he is no longer with us grows, so grows the appreciation of the botanical world for one of its great pioneers and scientists.

Merrill was born into a typical New England village of the past century: East Auburn, Maine, with fewer than 50 houses and one church, a community of farms and small industries. Life went on complacently there, more or less oblivious of what happened in the great world beyond, and few residents ever travelled "farther than Auburn or Lewiston, or perhaps Portland or Boston". It was the kind of environment usually thought least likely to breed men of great international outlook. But Merrill had in his veins the blood of Huguenot pioneers. A descendant of Nathaniel Merrill, who settled in New England in 1635, Merrill once wrote: "Pioneer spirit apparently existed on both sides of the family. My grandfather Noyes was a 'forty-niner'.... My father ran away from home and took to the sea at the age of fourteen, shipping as a cabin boy.... to the Orient via Cape Horn.... The call of the sea remained with him, however, for many years after he settled at Auburn." His parents were "people of limited means, and for several generations back were apparently 'hewers of wood and carriers of water',.... an upright, industrious people characteristic of rural New England".

As a boy, he attended country schools in East Auburn, but later he walked daily to attend a high school in Auburn. An early love of nature was evident, although, as Merrill often said, there was no trait in his ancestry that could explain it. This love was fostered and encouraged by his high school teacher in biology, so he went on to the study of "natural history". Earning his way, he studied at the University of Maine and received his B.S. in 1898, serving as class valedictorian. As assistant in natural sciences, he spent the following year in further course-work and in individual reading and research, an occupation that developed at such a pace and quality that the University granted him the M.S. in 1904. His first botanical paper — "Notes on Maine plants" — was published in *Rhodora* in 1899, a result of early field researches. His drive and determination to "get things done" is exemplified by his acquisition of a coveted copy of Britton & Brown's *Illustrated Flora of the Northern United States, Canada and the British Possessions* from

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\*) Elmer Drew Merrill, B.S., M.S., Sc.D., Ll.D., M.L.S. Born: East Auburn, Maine, October 15, 1876; died: Boston, Massachusetts, February 25, 1956.

Dr. Britton of New York through barter with dried specimens, duplicates from his own herbarium of the Maine flora which he had built up to approximately 1000 numbers by this time. Shortly after being graduated, he donated his entire herbarium to the New England Botanical Club

Merrill unwittingly laid the foundation for his long life of botanical peregrinations in 1899, when he decided to take a position as assistant agrostologist in the United States Department of Agriculture in Washington. He held this post until 1902, working assiduously, studying medicine at George Washington University on the side and publishing a number of technical papers on grasses the while. So well did Merrill train himself in this period that his superior early delegated to him greater responsibilities and, in 1900, sent him to the West, to Wyoming, Idaho and Montana, to carry out studies on the ranges and to "realise that New England is not all of the United States". In 1902, when he was offered the position of botanist in the Philippine Islands, recently freed from Spanish rule and put under American jurisdiction, he at first turned the offer down. He felt that he was far from possessing the knowledge and experience that such a pioneering work required, and he declined the offer and returned to his North American grasses, with a feeling that "I had really found my own niche in life".

This refusal, however, was not satisfactory to those in charge of choosing the personnel of the new Insular Bureau of Agriculture in Manila, especially to Merrill's chief and colleague in agrostology, Mr. F. Lamson Scribner, who had first proposed his name. The appointment was once again offered to Merrill in 1902, after Governor Taft of the Philippines had visited Washington. The second offer carried a higher salary than the first, but still Merrill declined. But when Scribner argued with him and pointed out that nobody in the United States had any knowledge of the Philippine flora and that he would have as good a chance as anyone to do a creditable job, Merrill accepted.

Merrill was highly regarded in government circles. Scribner's successor tried to convince Merrill that he should renounce the Philippine venture and, at an attractively high salary, remain in Washington; but his attempts were in vain.

Merrill accepted the appointment on February 20, 1902 and his boat for the Philippines sailed from New York on February 22. With that speed and efficiency so much a part of Merrill, he arranged his personal affairs, packed and, train delays notwithstanding, sailed on schedule without any inkling that it was the turning point of his life. "I was off on my long adventure; I, least of all, anticipated that for twenty-two years I would remain in the Philippines."

On his way to the Philippines, Merrill was able to visit the botanical centres in Ceylon and Singapore — beginnings, these visits, of a long period of close association with scientific institutions throughout the Far East.

Arriving in Manila in May, in the midst of an epidemic of cholera, Merrill took up his official duties in a private dwelling rented to the Bureau of Agriculture, reporting for work to an unfurnished room without even "a chair or table, much less a botanical publication or a botanical specimen". He was informed that he was to give his time and attention to "practical" work, but he soon decided that the building up of a reference collection and library was his prime task. With that Merrillean speed and determination that has sometimes earned for him the reputation of being autocratic, he set out to do what he held to be the important work, the ideas of administrative officials to the contrary notwithstanding.

It became apparent early that the governing powers felt it best to centralise all botanical work in one bureau. Since a very modest start had been made towards a collection of plant specimens and books at the Bureau of Forestry, Merrill arranged his transfer to this organisation, dividing his efforts, however, between the Bureau



Elmer Drew Merrill at the Escuela Agricola Panamericana in Honduras, 1953.  
Photograph by L. O. Williams.

of Agriculture and the Bureau of Forestry. He immediately began an intensive collecting programme, the first fruits of which were "representatives of all the weeds in the backyard of our 'office building'". The large Vidal collection had been destroyed by fire a few years before and a duplicate set in a Manila Museum had disappeared. A small botanical library at the Jardín Botánico had apparently been stolen. The Fernández-Villar collection, basic to the third edition of Blanco's *Flora de Filipinas*, had been destroyed in the burning of a monastery during the war in 1899. What would have thwarted the usual man, however, challenged this young pioneer from Maine: the very paucity of facilities stimulated him and led to the collecting, the traveling and the visits to foreign herbaria that were to fill the years ahead.

He made collecting trips to all parts of the Philippine Archipelago. In the first few years, half of his time was spent afield. Few men in the government service visited more localities than Merrill, and none with the steadfastness of purpose that guided him. "It never lost fascination," he wrote of this field work, "for I soon discovered that as far as the Philippine flora was concerned, exploration had been desultory; its little known wealth was only to be uncovered after years of arduous work in the field and in the office." This field work of Merrill, of his colleagues in the forestry service and of Filipino associates whom he trained, built up a rich herbarium, numbering, on his leaving the Philippines, 275,000 sheets which he planned to use as the basis of a Flora of the Philippines. With wise forethought, he sent more than 500,000 duplicates to foreign institutions, thus safeguarding the work against possible loss.

The formation of this herbarium was beset with difficulties that might well have discouraged a man of lesser drive. No serious botanical identification could be done in Manila, because of the lack of literature and herbarium facilities. In 1902, he set out to visit Buitenzorg in Java with a large collection of specimens to identify. Two months sufficed to determine his plants and familiarise himself with the literature necessary for carrying on his work back in Manila. His transfer to the Bureau of Government Laboratories and a large grant for the purchase of books enabled him subsequently to build up one of the foremost botanical libraries in southeastern Asia.

As little by little the need became evident for investigating a wider geographic area fully to understand the Philippine flora, Merrill carried on studies and collecting in China and on islands near the Philippines, while his associates penetrated Borneo, Indo-China, the Marianna Islands, Guam and Amboina. With the addition of several botanists to his staff (Dr. E. B. Copeland, Dr. H. N. Whitford and Mr. A. D. E. Elmer) and the increase in well-trained Filipino field men, he enlarged his programme and initiated an active exchange of plant materials with Japan, China, India, Java, Australia and other countries. The interest of European and American botanists in the Philippine flora was stimulated by Merrill, and he was able to enlist the collaboration of great botanists the world around, such as Prof. Oakes Ames of Harvard University who classified the rich orchidological flora of the Archipelago.

The world-important herbarium and library which Merrill and his associates built in Manila was purposely burned by the Japanese Army one day before the liberation of Manila in 1946. Painful blow though it must have been to Merrill and his earlier associates, he at once encouraged Dr. Eduardo Quisumbing, an outstanding Philippine botanist whom he had trained, and his Philippine friends to begin again. Merrill himself, by this time at Harvard, found time and strength to locate duplicate material in American and European herbaria to aid in this rebuilding under the aegis of Philippine scientists.

As time went on, Merrill was appointed Associate Professor of Botany in the University of the Philippines and part-time head of the Department. This heavy extra teaching and administrative load naturally seriously reduced his botanical productivity. Accordingly, this connexion with the University terminated in 1919, and Merrill was given full time for his own research in the Bureau of Science.

In 1906, in great part at Merrill's insistence, the *Philippine Journal of Science* was established. A pioneer in government scientific journals, it was from the start heavily botanical. Throughout his stay in the Philippines, Merrill did the editorial work on botanical articles.

In May, 1907, Merrill married Mary Augusta Sperry of Illinois in Manila. Immediately after the wedding, the couple began a cruise to the United States, visiting China and Japan en route. On the return trip he visited Kew and the British Museum, Leiden and other herbaria on the continent to study the types of Philippine plants. All but the youngest of their four children were born in Manila: Lynne, in 1909; Dudley Sperry, in 1912; Wilmans Noyes (who died in infancy) in 1914; Ann was born in Washington, in 1916. In 1915, while visiting Washington, the Merrills decided that it would be better for the children to remain in Washington. Accordingly, Merrill returned to Manila alone, to be separated from his family for the next eight years, except for a leave in 1920.

Once back in the Philippines, Merrill began work with renewed vigour, devoting even more time and energy than previously to his programme. But he found time for non-botanical interests, such as the Masons, in which he rose, in his characteristic manner of "getting things done", to the 33rd degree, and the large men's social group in Manila, the Columbia Club, in which he rose to be president.

An enumeration of Merrill's accomplishments in this second part of his Philippine stay would be long and has been discussed in detail by Merrill himself and by Quisumbing. A mere brief mention of several of his accomplishments, almost any one of which would be considered outstanding in itself, must suffice. By 1914, the Bureau of Science had grown from its sad beginnings in a vacant house to a proud new building, and most of the scientific work of the Philippines — medical and public health, mining, fisheries, anthropology and other branches of science — had been centralised in the Bureau. With the retirement in 1918 of the Bureau's director, the Governor-General of the Philippines appointed Merrill to fill the vacancy. Even though he had temporarily served as Acting Director, it was an unexpected appointment, albeit an honour. Nevertheless, Merrill realised that further administrative work would lessen his scientific output. Merrill's tasks as Director multiplied incredibly in number and complexity, as he had to act in such diverse fields as the manufacturing of vaccines (not only for the Philippines, but also for many cholera-ridden cities of China) and the drafting of regulations concerning oil-lands.

Merrill had long planned a *Flora of the Philippines*, but this plan he had to sacrifice when he became Director of the Bureau of Science. In 1912, he had published a *Flora of Manila* in connexion with his teaching duties. The *Flora of the Philippines* did, however, become his *Enumeration of Philippine Flowering Plants*, published in four volumes between 1923 and 1926. It attempted "to account for all binomials accredited to the Philippine flora, adjust the synonymy, cite all important literature references, illustrative collections when desirable, determine the Philippine and extra-Philippine distribution of each species and record native names". The indexes list more than 21,000 binomials and 12,000 native names of plants. Merrill succeeded admirably in these goals and produced a work that will always be basic to Philippine, nay, to Malaysian botanical work.

With the exception of botanical trips and three short visits to the United States



Elmer Drew Merrill enjoying the visit of friends at his home in Jamaica Plain, Boston, in 1953. Photograph L. O. Williams.

on leave, Merrill took no vacation from 1902 to 1919. His capacity for work without apparent tiring was evident throughout his stay in the tropics. As one of his admirers aptly wrote: "His reaction to added work was to lengthen the day". During his last year in Manila, Merrill was offered the presidency of the University of Manila, but he declined this honour.

By now, Merrill's reputation as scientist and administrator was known far and wide. In 1923, the University of California offered him the Deanship of its College of Agriculture. Merrill's family lived in California, and this appointment appealed to him, the more so because of the possibility of rejoining those from whom he had so long been separated. It was not, however, without regret that Merrill left the Philippines, where his life's botanical work lay and where he had many friends and admirers. One Manila paper referred to him as "almost more of a Philippine than an American", a high compliment accorded to very few foreigners. Another editorial, entitled "Keep him", urged the government in the strongest terms to induce Merrill to stay. The editorial pointed out that before Merrill was appointed Director, the position had been offered to several Filipinos, all of whom declined in favour of Merrill. It ended by advising: "When you have a good man, keep him."

It was not a tranquil situation that Merrill entered at Berkeley, where he found conflicting ideas on policies, resulting in part from a very rapid expansion during the previous ten years and in part from a tendency for the College of Agriculture to feel less and less that it formed an integral part of the university.

Merrill's ability to go forthrightly — sometimes even bluntly — to the core of a problem, saw him through, even though he himself felt that he lacked "experience with academic or research problems in agriculture; knew nothing of the special problems of the College of Agriculture and still less regarding the problems of Californian agriculture". He took a strong stand that the College of Agriculture must continue to form a part of the university; and he succeeded in raising the standards of teaching and research. He has stated that he departed from custom by encouraging staff members to take advanced degrees; and, not always without opposition, he worked for measures which he believed would make administration more efficient. Merrill considered his most valuable contribution during his Deanship to be the establishment of the technical journal *Hilgardia* in 1925. From 1927-1928, Merrill served as Director of the California Botanical Garden, in Los Angeles.

On the occasion of Merrill's resignation, the Dean of the Graduate Division of the University of California said publicly: "It is given to few men who carry the burdens of an important office with numerous and complicated problems over a period of years, to close their labors in such an office on terms of friendship with all with whom they come in contact and with themselves. Such, however, is strictly true in the case of Dean Merrill.... It is fitting that as he takes leave of us.... we of the University of California record, not only our deep regret at losing him, but also our profound appreciation of his remarkable contribution to the success and effectiveness of the program of the College of Agriculture, of the scientific activity of the University in general, of our gratitude for the friendship and sympathy which he has shown to his colleagues unflinching and of the high regard which we all entertain for him as a scholar, a scientist, and, above all, a lovable human being."

In January, 1931, Merrill accepted the post of Director-in-Chief of the New York Botanical Garden, upon the retirement of Nathaniel Lord Britton. He was simultaneously named Professor of Botany at Columbia University.

Merrill asked himself the question: "Why should one elect to leave California where one had met with a measurable degree of success, to take his chances, after middle life, in New York....?" His own stated reasons were forthright: he had confidence in his successor to carry on the work that he had begun; he yearned

to return to the botanical field which was more truly his *forte* than was agriculture; and he believed that he could help make the New York Botanical Garden still more outstanding than it had been in the past.

His five years in New York were marked primarily by success in administration of one of the world's largest botanical and horticultural centres during one of the most serious economic recessions that the country had ever experienced. He kept the vast programme of the Garden going without retrenchment through the lean years. "An iconoclast in reference to currently accepted herbarium methods", he substituted new procedures for certain conventional practices. He initiated, for example, the incorporation of original descriptions in the folders with the plants themselves. Some of his other innovations, now well known, were the inclusion in the herbarium of photographs of types, carbon rubbings and photostats. While most of these ideas were not original with Merrill, they had never been tried in a large herbarium. Perhaps Merrill's outstanding innovation during this period was the integrated *Kew Index*. This plan, providing for the cutting up of two original volumes and all supplements of this invaluable work and mounting the entries in alphabetical order, resulted in an incredible saving of time. Much — in fact, most — of this work Merrill found possible by taking advantage of the Works Progress Administration and other governmental agencies for the assistance of those who, through the business depression, found themselves temporarily without the means of earning a livelihood. He was influential in 1930 in having the *International Address Book of Botanists* published, and one of his triumphs at New York was his founding in 1931 of *Brittonia*.

Along with his heavy organisational and administrative duties, Merrill was able to resume his taxonomic and phytogeographical research on the flora of the Far East — his chief interest — and this, perhaps, more than anything else, made his years at New York happy and productive. Shortly before his death, he gave his personal library of 2600 titles and his diplomas and decorations to this institution. Duplicates from his library were sold, and the proceeds established at the New York Botanical Garden the *Elmer D. Merrill Fund* for botanical publication or for a medal for deserving botanists or botanical students. After his death, this Fund was enlarged by contributions from many parts of the world.

Merrill often joked about his "coming back east" in successive steps — Manila, Berkeley, New York. The final move east was in 1935, when he came to Harvard University in Cambridge, Massachusetts, as Administrator of Botanical Collections. This move to Harvard marked a milestone in his career. For the first time, Merrill was taking an administrative post in a private institution. And Harvard was not only private but was well known as a stronghold of individualism and natural non-conformity to set patterns. His previous experience had been entirely within governmental or civic entities. It must have been difficult for Merrill at first, for so many years in government service cannot help but mould the most individualistic of men to some degree to the deadening monotony so often characteristic of government bureaus.

Through a century and a half, there had grown up at Harvard eight separately administered botanical units; the Gray Herbarium, Arnold Arboretum, Botanical Museum, Farlow Library and Herbarium, Harvard Forest, Atkins Garden and Research Laboratories in Cuba, Bussey Institution and Maria Moors Cabot Foundation for Botanical Research. They were sometimes referred to as the "orphans", sometimes as "Harvard's botanical empire". The aim of the post of the Administrator of Botanical Collections was the drawing closer of these semi-autonomous botanical institutions to reduce excessive duplication of effort and equipment, thus enhancing the efficiency of research. This was a new title at the University, and its creation

resulted from a long-growing feeling on the part of administrative and academic officials that some sort of coordination might be desirable.

For several reasons, the most weighty of them being, as Merrill pointed out in his Annual Reports for 1941, 1942 and 1943, the world conflict with resulting economic and financial uncertainty and serious curtailment of building materials,



Caricature of Elmer Drew Merrill sketched in 1950 when he was acting as moderator of the Taxonomic Section of the VIIIth International Botanical Congress in Stockholm.

little was accomplished towards effective material coordination of the Harvard botanical units. This had to await more favourable times. As one of his colleagues has written, "his last Annual Report gives a retrospect of his eleven years and shows the orphans, though still orphans, growing healthily".

A year after his arrival at Harvard, Merrill became Arnold Professor of Botany and, in 1937, Director of the Arnold Arboretum. He devoted his major efforts to

the building up of the great herbarium of this institution and to research on Asiatic plants, cooperating with the botanists of the Archbold Expeditions and similar endeavours. He was eminently successful in securing gifts for the prosecution of this work, even during the hardest war years. From 1936 to 1946, the Arboretum's endowment had been increased by about \$ 321,500. Merrill wrote in his final (1946) Annual Report: "When one considers that the decade 1935-1946 covered the last half of a long-continued financial depression which actually ceased only after the most destructive war of modern times was initiated, the financial record must be considered as at least satisfactory. It was from the gifts for immediate expenditure that much of the expansion activities were financed in the past decade, for the normal income in general sufficed only to take care of obligated charges."

Wherever world conditions permitted, he encouraged collectors to send in their material, which resulted in the arrival of specimens in unprecedented quantities from China, India, Indochina, Burma, Siam, Malay Peninsula, Philippines, Java and other parts of the Malayan region, Papuasia, Australia, New Caledonia, Mexico, and part of Middle America, South America, the Antilles and Africa. "Each institution with which Merrill became associated," wrote one of his colleagues, "was rapidly enriched with new collections, due to his stimulation. The flow of materials sometimes became a flood, and, in an instance or two, threatened to submerge all available space where he was located." This was true at Harvard, for the herbarium-building of the Arnold Arboretum soon after Merrill's arrival became inadequate for storing the collections. Recent developments resulting in the partial or total shutting off of large parts of the world, perhaps for many years, to scientific exploration, has proved how foresighted Merrill was, but there were not a few who were dismayed and worried over the flood of materials so vast that most of it could but be stored away for future generations to study. In a decade the herbarium was increased by 220,000 specimens.

During this period, Merrill published profusely and edited facsimile editions of early botanical treasures such as Gronovius' *Flora virginica* and Walter's *Flora caroliniana*, as well as several works of Rafinesque. His early interest in economic and historical botany was rekindled, and he wrote a number of articles — such as "Domesticated plants in relation to the diffusion of culture", "The phytogeography of cultivated plants in relation to the assumed pre-Columbian Eurasian-American contacts" — which have already significantly influenced thought in ethnobotanical writings. Merrill was likewise most active during the war as a tropical consultant to the Secretary of War, writing for the survival programme of the armed forces his "Plant life of the Pacific world", a manual of poisonous and food plants of the jungles of the Pacific area.

Merrill was retired by the Harvard Corporation from his administrative post on July 31, 1946 in his seventieth year and four years over the retirement age for administrative officers. He continued as Arnold Professor of Botany until 1948, when he became Arnold Professor Emeritus, carrying on his own research both at Harvard and abroad, putting in long hours of work in spite of age and failing health.

One of his major contributions of this post-retirement period is his book: "The botany of Cook's voyages". It deals critically and mercilessly with the extravagant theories which some recent geographers and anthropologists of the ultra-diffusionist school were basing on warped, erroneous or misinterpreted "evidence" — theories concerned especially with the origin and dispersal of certain economic plants. This work actually had its origin in 1950, when "anthropological friends" asked him to sum up the case against new diffusionists, and when, shortly afterwards, one of the diffusionists challenged him to prove his position. A trip to London in 1951

afforded him the opportunity of studying the plants and old records of Cook's voyages, preserved in the British Museum. He found in this research so many unpublished details which had direct bearing on the problem of the distribution of economic plants that he resolved to make them available in print. In writing, the book grew into what is a rich compendium of all sorts of information having to do with the history of cultivated and economic plants and a most thoroughly devastating exposé of the shoddiness of much of the modern writing in this field. During the writing of this book, Merrill was taken seriously ill, and it had to await his recovery. No sooner was work resumed than he suffered a relapse and was able to complete the book only under great travail in 1954. Several of his colleagues assisted him in an editorial capacity, but the book itself, a monument to the determination of a scientist exasperated with prevalent half-truths, was entirely his product. In spite of its rambling and verbaceous character — a defect which Merrill himself recognised and for which he apologised as due to his "decline in physical and mental capabilities" brought about by age and infirmity — it has been most glowingly reviewed in America and abroad. Shortly after the publication of the volume, he entered into a rapid decline and suffered several severe shocks that incapacitated him completely.

Besides the several great schools, herbaria and gardens which owe so much to Merrill's efforts, he left more than 500 published papers and books. Two of the greatest of his works are the "Bibliography of Eastern Asiatic Botany", published jointly with Dr. E. H. Walker of the Smithsonian Institution in 1938 and his *Index Rafinesquianus*, published in 1949.

During the latter part of the war years, a committee of Harvard botanists, appointed by Merrill and the Chairman of Harvard's Department of Biology, Professor Alden Dawson, began to study anew the possibilities of coordinating botany at the University. After a detailed examination of Harvard botany and its needs under the new circumstances of the post-war period, an overall plan to bring all of Harvard's herbarium and library facilities together in fireproof quarters in Cambridge was submitted to the Corporation and accepted. A number of Merrill's ideas of the pre-war period were incorporated in modified form. Merrill, at first enthusiastically in favour of the plan, gradually came to fear that it would mean the end of taxonomy at Harvard, and to believe that it was not in the best interests of the Arnold Arboretum. After his retirement as Director, he opposed it strongly and, in spite of failing health, continued to do so actively through the remaining years of his life. The fact that the University put the final plan into effect, his opposition notwithstanding, combined with his lingering illness to make the last few years of his life somewhat unhappy, quite in contrast to the buoyant spirit of his earlier years.

His honours were many. He received honorary degrees from several universities: Doctor of Science from the University of Maine in 1926 and from Harvard University in 1936, and Doctor of Letters from the University of California in 1936 and from Yale University in 1951. A singular honour was the publication, in 1946, by *Chronica Botanica* of *Merrilleana*, a collection of his outstanding writings. In 1939, he was given the gold medal of the French Ministry of Agriculture and a diploma from the Société Nationale d'Acclimatation. In the same year, the Linnean Society of London, of which he was a Foreign Member, decorated him with its medal; he was the first American botanist so to be honoured. In 1950, there came to him the Geoffrey St. Hilaire medal and the high honour of Commander in the Netherlands Order of Oranje Nassau. The New York Botanical Garden gave him its Distinguished Service Award in 1952.

During his long and active career, he served as one of the Presidents of the

Section of Taxonomy & Nomenclature of the Sixth International Botanical Congress in Amsterdam (1936) and of the Seventh in Stockholm (1950); as President of the American Association for the Advancement of Science (1931), the Botanical Society of America (1934), the New England Botanical Club (1937-1939), the Botanical Society of America (1934) and the American Society of Plant Taxonomists (1946). In 1935, he served as President of the International Union of Biological Sciences. He held membership in many scientific societies, including: American Academy of Arts and Sciences (Fellow); American Philosophical Society; Philadelphia Academy of Natural Sciences; National Academy of Sciences; Académie des Sciences de l'Institut de France (Correspondent); Torrey Botanical Club; Sigma Xi; Phi Beta Kappa; Alpha Zeta; Phi Kappa Sigma; Royal Horticultural Society of London; Edinburgh Botanical Society; Royal Society of Edinburgh; Universidad Nacional de La Plata (Académico Honorário); Malayan Branch of the Royal Asiatic Society; Deutsche Botanische Gesellschaft; Muséum National d'Histoire Naturelle of Paris (Correspondent); Nederlandse Botanische Vereniging; Kon. Nederlands Aardrijkskundig Genootschap; Naturhistorisches Museum of Vienna (Correspondent); Svenska Vetenskaps Akademien; Institut Genevois; Société Botanique de France; Japanese Botanical Society; Peking Society of Natural History and Royal Agricultural and Horticultural Society of India. In 1936, he was official guest of Harvard University at its Tercentenary Celebration. For a number of years, he served as a member of the Latin American Committee of Selection of the John Simon Guggenheim Foundation. He served at various times as a member of the board of directors or as trustee of a number of institutions and societies, such as the Escuela Agrícola Panamericana in Honduras, the Gorgas Memorial Institute and the New York Horticultural Society.

Physically, Merrill was small and wiry, with commanding and penetrating eyes arched over and set off by bushy eyebrows. His voice was sharp and clipped, characterised by a lasting and unmistakable Maine accent; his speech frank and blunt. He was prone to make quick, on-the-spot decisions. From earliest youth he was possessed of an unsatisfiable drive sometimes approaching brashness — the key to his great achievements. It was that drive so characteristic of Maine people — whether they spend their lives on their native farms or whether, like Merrill, they travel to parts foreign. It was that drive which, in an earlier period, sent the Maine clipper ships to all corners of the earth. And there is much in Merrill's career — his urge to see new lands, to seek out the unknown, to build great institutions for future generations — that can be likened to the fast ships that formerly took the name, the drive, the spirit of Maine all over the globe. For, though Merrill left his native habitat early in his career and never returned to practice his profession there, he remained always a State of Mainer. As a New Englander myself, I cannot, in my mind, divorce the man, his personality and his achievements from the Maine that was in his blood.

Partly because of his strong individuality, Merrill probably struck his associates and colleagues in a great variety of ways, and each will remember his personality from a different facet. Merrill taught no courses, but he had a sympathetic interest in students. I first met him when I was a graduate student at Harvard under the late Professor Oakes Ames. I was examining a specimen in the Economic Herbarium of Oakes Ames when Merrill happened in. At once, he began a conversation of some twenty minutes about the species, how it grew in the field, what botanists were thinking about it and, most important of all, what still remained to be learned about it. It was this last part of the conversation, which he carried on with sharp twinkling eyes, that thrilled the student with the urge to go ahead and explore the unknown, a climax to which, I am now convinced, he led up with deliberate design.

He ended by inviting me to drop in and chat whenever I happened to be at the Arnold Arboretum, and I found throughout my student years that, busy man though he was, he was never cloistered beyond the reach of students and younger botanists.

Merrill often made quick appraisals of a man's promise in botany. Whenever circumstances permitted it, he went out of his way to help those who he felt showed promise, and many are those who owe their start or continuance in the botanical field to his willingness to sponsor or finance their work.

His drive and audacity occasionally irked some of his more reserved colleagues, a few of whom may have thought of Merrill as boastful or vain; but most of those who were so disturbed would have agreed that he was convinced in his own mind of the long-range right and justice of his viewpoint.

It has truthfully been pointed out that in his botanical work Merrill "seldom went far below the surface, being content in most instances, with identifying the plants with which he dealt. In this respect, he was one of a small group of floristic taxonomists of which there are few remaining. This type of taxonomic research was suitable to the region of his study and was the only approach that would have permitted him to cover the ground that he did in his lifetime." It is exactly this characteristic ability to deal superficially with extraordinarily large numbers of plants that makes so apt the epithet "the American Linnaeus" which has been applied to him. Merrill, quite unlike some of his contemporary taxonomists, was not disdainful nor distrustful of the newer approaches in botanical work, and, while admitting his desire to step beyond systematics, he realised that it would not be possible, with the magnitude of the problems he had set as his goal.

One of the most astounding aspects of Merrill's entire career was the paucity of formal instruction in botany which he received. "There are few prominent scientists of the present era," one of his colleagues at Harvard has written, "who are so nearly self-taught in the field of their prominence as was Elmer Drew Merrill, whose total formal training in botany included but two one-semester courses taken as undergraduate...." Yet perhaps the true systematist — at least one so active as Merrill — must, in a sense, be self-taught. Merrill rarely preached, but I have heard him say to students on several occasions: "The hours you spend in the field, the herbarium and the library are worth three times those you spend in the classroom, no matter who your professor may be." Merrill was training himself until the very last, even when, bedridden, he would read large tomes in anthropology, geography and biology in his race with death to finish "The botany of Cook's voyages". And crippled and weak though he was, he thrilled to every new discovery which he made in his reading, regretting that he had no time left him to write even more papers on the variety of topics he had covered in this, his last, research.

And the final point which any appreciation of Merrill must bring out is his international outlook. I think that it is fair to say that he was ahead of all of his contemporaries in the ample viewpoint so essential to the true global botanist. Merrill rarely gave the impression of trying to be international; it seemed to be as natural to him as his urge, in later years, to vacation in his Maine woods. He was not entirely convinced that international organisations and commissions would provide the best avenue for international cooperation; but of the value of personal travel abroad, study in foreign centres, attendance at botanical congresses, he had not the slightest doubt; and one of his preoccupations as administrator was that opportunity for travel and foreign study be made available to him and his associates. All of us agree that Merrill was an outstanding internationalist in botany, but I venture to predict that the full impact of the international emphasis of his work will not wholly be appreciated for a quarter of a century. His influence as an international figure in botany will grow with the passing of the years.