

CHARLES MONTAGUE
COOKE, Jr.,
A BIO-BIBLIOGRAPHY

By
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and
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C. MONTAGUE COOKE, JR., IN HIS LABORATORY AT THE MUSEUM. (PHOTOGRAPH BY J. GILBERT McALLISTER.)

Charles Montague Cooke, Jr., A Bio-bibliography 1874-1948

Biography

By YOSHIO KONDO
BERNICE P. BISHOP MUSEUM

INTRODUCTION

After 46 years of devoted service to Bernice Pauahi Bishop Museum, Dr. C. Montague Cooke, Jr., scion of a leading pioneer family, passed away at *Kualii*, his home in beautiful Manoa Valley, on October 29, 1948, at the age of 73. He is survived by his wife, Eliza (Lila) Cooke; a son; a daughter; two brothers; five grandchildren; and two great-grandchildren.

Doctor Cooke was born in Honolulu on December 20, 1874, at the Old Mission Building on the corner of Kawaiahao and King Streets, the first child of Mr. and Mrs. Charles Montague Cooke, Sr. At birth he weighed only two and one-half pounds and was cradled in a shoe box. He was so frail that there was little hope that he would live, but Kaaaina Naihe, his Hawaiian nurse, cared for the child according to ancient Hawaiian medical practices. Her treatment undoubtedly saved his life. To the skillful nursing of Kaaaina was added the devoted attention of an intimate friend of the Cooke family, Princess Bernice Pauahi Paki, who was to become Mrs. Charles Reed Bishop, wife of the founder of Bernice P. Bishop Museum.

Dr. Cooke represented the eighth generation in an English family that migrated to New England and distinguished themselves for their service in the New England Colonies and, later, in Hawaii. Thomas Cooke arrived in New Haven, Connecticut, in 1630 where he served as a member of the General Court, the governing body of the colony. His grandson, the Reverend Samuel Cooke (1687-1747), was graduated with Yale's first class in 1705. He was a member of the Connecticut General Assembly and, after ordination in 1715, became pastor of the Bridgeport Church at Stratford. From 1732-1746 he was a fellow, or trustee, of the Yale Corporation.

Joseph Platt Cooke (1730-1816), the son of Samuel, was graduated from Yale in 1750 and thereafter held many public offices. During the Revolutionary War he was a colonel in command of the American forces at Danbury when that town was attacked by the British and was a personal friend of George Washington and Lafayette. From 1776 to 1784, he was a representative in

the Connecticut Legislature and a member of the Continental Congress. His son, Joseph Platt Cooke, Jr. (1760-1841), was a prominent church official and a captain in the Continental Army.

Amos Starr Cooke (1810-1871), who was the son of Joseph Platt Cooke, was a teacher and businessman. He came to Hawaii in 1836 with the eighth company of missionaries sent to the islands by the American Board of Commissioners for Foreign Missions. He was a co-founder of the firm of Castle and Cooke and founder of the Royal School for the children of Hawaiian chiefs, serving for many years as educational and financial head. His son, Charles Montague Cooke, Sr. (1849-1909), received his scholastic training at Oahu College (Punahou School) and Amherst Agricultural College. Thereafter he devoted his energies to the development of Hawaii's economic life. He founded Lewers and Cooke and, in partnership with Peter Cushman Jones, started the Bank of Hawaii. As a director of most of the important island business firms, and in association with his intimate friend Charles Reed Bishop, he was largely instrumental in giving the sugar plantations a sound financial structure. He was a trustee of the Punahou School, the Bernice P. Bishop Trust, and of Bishop Museum; founder of the Cooke Library at Punahou; and inaugurator of the Honolulu Aquarium. After the overthrow of the Hawaiian monarchy he was sent to Washington as a special emissary to assist in negotiating the treaty of annexation.

Of the tenth generation of the Cooke family 63 were living in 1949, 33 boys and 30 girls.

Dr. Cooke attended Punahou Preparatory School in Honolulu and was graduated from Oahu College, or Punahou High School, in 1893. Then, in the family tradition, he attended Yale University, where he was awarded the degree of Bachelor of Arts in 1897, that of Doctor of Philosophy in 1901. At Punahou he studied under one of Hawaii's outstanding teachers, Dr. Albert Brown Lyons, Professor of Science at Punahou (1888-1895), and at Yale, under the renowned zoologist, Addison E. Verrill, both of whom had much to do with fashioning his future.

Dr. Cooke was destined for a scientific career. As a young child he spent his spare time gathering and sorting the ferns about his house, and when he was only eight years old he expressed a desire to become a biologist. Thus he soon forsook his fern gathering to search for land shells in Nuuanu Valley. One of his first discoveries was at a heiau, or Hawaiian temple, called Kaniaka Pupu (Singing Land Shells), where he discovered a large colony of *Achatinellae* which the Hawaiians thought responsible for the loud stridulations made by crickets. His hikes in Nuuanu Valley were the forerunners of overnight and holiday exploring expeditions into the mountains of Oahu with his chums, particularly Albert Judd and John Waterhouse. The three boys called them-

selves the K.K.K. club, but what the initials stood for has been forgotten.

Dr. Cooke's interest in zoology was furthered by his travels. With his father, he spent some time in Colorado in 1886. In 1890, they traveled widely in Europe, where he visited museums, zoological parks, and botanical gardens. In 1900, he studied the types of Achatinellidae in the large museums of the eastern United States; and in 1901, 1905, and 1932, he made trips to Europe for study purposes.



DR. AND MRS. COOKE DURING THEIR HONEYMOON IN 1902. (PHOTOGRAPH COURTESY OF MRS. C. MONTAGUE COOKE, JR.)

The year 1901 was a highly significant one in the life of Dr. Cooke. He married, attained his doctorate, and learned that a place on the staff of Bishop Museum awaited his return to Honolulu. He first met his wife, the former Eliza (Lila) Lefferts, of Brooklyn, New York, in Bermuda, where he was investigating marine organisms with Dr. Verrill. They were married April 25, 1901, two months before Dr. Cooke received his doctorate at Yale. Like her husband, Mrs. Cooke has contributed much to the cultural life of Honolulu—its social, artistic, musical and religious interests. Especially noteworthy is her work in the development of the Y.W.C.A., of which she was president from 1930 to

1936. Mrs. Cooke always gave full and intelligent support to the scientific work of her husband, joined in his unobtrusive, often camouflaged, philanthropies, and added charm to the relationship between Dr. Cooke and his colleagues and employees. No one knows the number of young men and women educated by them or the number of poor and aged they supported. Typical was their treatment of Kaaaina Naihe, Dr. Cooke's Hawaiian nurse who, after her days of service were ended, was provided with a home and income. And Sakichi Kawashima, the Cooke family's faithful man-of-all-work, was Dr. Cooke's constant companion and good friend. They were inseparable in more ways than one. Kawashima's father, on departing for Japan in 1929, said: "Dr. Cooke, I give my son to you." Kawashima often remarked with a grin: "There is one thing Dr. Cooke never can do to me, he can never fire me." He still serves Mrs. Cooke.

The opportunity to realize his cherished hope, official association with the institution in which his interest centered, led Dr. Cooke to shorten his honeymoon trip, which had been planned for a year, and to postpone his studies at European museums.

On September 19, 1902, the Museum Trustees voted "that Mr. C. M. Cooke be engaged as an assistant at the Museum with the salary at the rate of \$112.50 a month." For three years Dr. Cooke served as guide to visitors and general handyman, devoting any remaining time to his collections, which for lack of space in the Museum building, were stored at his home. There they remained until Paki Hall of Bishop Museum was completed in 1911. His home "laboratory" known as "the Chalet," is recorded as the reference point for many early collections. During this period he wrote his first scientific paper (B. P. Bishop Mus. Occ. Papers, vol. 2, no. 1, pp. 65-76, 1903), on the color varieties of *Achatinella bellua multizonata* Baldwin found on the slopes of Nuuanu Valley.

As his work progressed, Dr. Cooke realized that adequate descriptions and the classification of the collections on hand were impossible until the types of species lacking in Honolulu had been examined. Hence in 1905 and 1906 he made an extensive study of other types that were deposited in American museums, the British Museum (Natural History), and in the museums of France and Germany. He also made a special trip to Algeria to study the collection of Ancey, who had in his possession numerous types of species named by himself. Part of Ancey's collection was later bought and presented to the Museum by Dr. Cooke. Much of the literature relating to Pacific land shells was gone over thoroughly during these early study trips and reprints were obtained for his shell library when possible; but if copies were not available he laboriously wrote them out in longhand. In later years, Dr. Cooke made study trips to the mainland United States as the need arose, the last in 1947.

On October 14, 1907, soon after his return from Europe, he received notice from the Museum Trustees of his promotion from Museum Assistant to Curator of Pulmonata, with this comment: "The Trustees feel that your scientific capabilities and your service to the Museum deserve this recognition." With his new position he received a salary of \$150.00 per month. Thereafter, Dr. Cooke continuously served the Museum for 41 years, working under three Directors. In later years Dr. Cooke turned his salary back to the Museum to be used toward building up his department.

EXTRA-MALACOLOGICAL INTERESTS

Dr. Cooke's interests were many. Besides being an internationally known malacologist, he was a collector of art objects, a horticulturist, an animal husbandman, and a civic leader.

Of the arts of design, Dr. Cooke was fondest of prints and began collecting them during his college days. He browsed for them in the shops of Paris, Tokyo, London, New York, and Honolulu, where he spent many hours in the small Japanese shops near River Street. At first he bought prints merely for beauty; but in the early 1920's, he began a systematic selection of American prints, of which he already had a nucleus, choosing the works of such etchers as Troy Kinney, Kerr Eby, Cadwallader Washburn, Donald Shaw, MacLaughlin, Ernest Haskell, Childe Hassam, Armien Hansen, Frank Benson, John Taylor Arms, and others who were then founding the American School of print making. Later he added prints by Whistler, Pennell, Moran, Smillie, and Bickness. To record the development of the American School of wood engraving, which flourished in the late 1800's, he made a complete collection of Timothy Cole's "Old English Masters" and "Old Italian Masters" and added the works of local artists, the etchings of Huc M. Luquiens and N. Nelson Poole and the wood engravings of John C. Poole. His entire collection of three to four thousand prints was presented to the Honolulu Academy of Arts when the beautiful building that houses such treasures was constructed and given to the people of Hawaii by his mother, Anna Charlotte Cooke.

Early in life Dr. Cooke began experimenting with amaryllis, hibiscus, iris, ground orchids, and anthuriums. For years he bred varieties of hibiscus that now grace the gardens of many Hawaiian homes and border Oahu's highways. He was proudest of the Edith Cooke hibiscus named for Mrs. Charles M. Cooke III. Many hours were spent in caring for his plants, discussing his methods with fellow horticulturists, and exhibiting his handiwork to friends. From 1924 to 1927, together with Marie C. Neal of the Museum staff, he made careful notes of the start, peak, and decline in the flowering season of various plants along the route from Manoa Valley to Bishop Museum in lower Kalihi Valley. The results of these observations were read in 1927; and in 1928,

with subsequent recordings, they were published by the Tourist Bureau. They were reprinted in Miss Neal's book, "In Gardens of Hawaii" (B. P. Bishop Mus., Special Pub. 40, 1948).

Dr. Cooke also experimented with the breeding of birds and fish. With *Kualii* as a base, he extended his studies throughout Honolulu.

Across the Koolau Mountains from *Kualii*, Dr. Cooke had another laboratory, his 102-acre Kaimi Dairy. There, with the expert assistance of Isaac Iwanaga, he started in 1920 to conduct controlled experiments in mating and progeny testing (dam-daughter comparison), in breeding methods, and in pasture development. As a result of his experiments the production of milk from each cow in his herd was doubled, and the butterfat content raised from 4.2 to 4.8 percent. These experiments, recorded in detail, have served as guides for other dairymen; and blooded stock from the Kaimi herd is now widely distributed in Hawaii. The work and cost of Kaimi farm were always minimized by Dr. Cooke, who said he was doing "missionary work" and felt repaid by the knowledge that his experiments would improve Hawaiian dairy herds.

Through developing and maintaining his own pastures, Dr. Cooke developed a great interest in the conservation of grass lands, forests, and soil. The devastation caused by overgrazing and the consequent rapid runoff of water on lands surrounding *Kuaihelani*, his Maui estate on the slopes of Mount Haleakala, caused him much concern, and he attacked the problem with characteristic enthusiasm. In a small area, he constructed a system of trenches and sumps designed to increase the percolation of water and to trace its course underground. This method brought remarkable results. Even during the driest season the reclaimed land was marked by lush vegetation in contrast to the general barrenness of surrounding areas. He was convinced that this ditch-sump method, supplemented by dams on small streams, would cause the forest growth to descend from the upper zones of west Haleakala and cover the nearly barren lowland, as well as augment the artesian water supply.

Dr. Cooke also gave time and thought to the cultural welfare of his homeland, continuing the work begun by his distinguished ancestors. He served as Regent of the University of Hawaii (1909-1914), as Trustee of Bishop Museum (1929-1948), as a Trustee of Palama Settlement (1925-1948), as a Life Member of Queen's Hospital, as a Trustee of Leahi Hospital (1911-1920), and as President of the Honolulu Academy of Arts (1927-1948). He was also a member of the Volcano Research Association, of the Honolulu Park Commission (1910-1913), and of the Fish and Game Commission (1919-1922); and he took part in the activities of Sigma Xi, the Hawaiian Malacological Society, the Hawaiian Academy of Science, the Social Science Association, the Chiefs of Hawaii, the Pacific Club, the Oahu Country Club,

the Symphony Orchestra, the Community Chest, and the Institute of Pacific Relations, of which he was one of the founders. To all these organizations Dr. Cooke contributed, not only service, but financial aid when the need arose.

MALACOLOGICAL WORK

THE COLLECTIONS

Dr. Cooke dedicated much of his life to assembling within Bishop Museum as complete a collection as it was possible to make of Pacific land shells. He envisioned the Museum as a Mecca to which specialists might turn for study material and find practically all of the species assembled and the preliminary segregatory work done. How well he succeeded in his efforts is attested by the two and one-half to three million specimens accumulated within the past 46 years and by the numerous publications that have been based upon them. Such publications, by various authors, deal with Achatinellidae, Amastridae, Tornatellinidae, Zonitidae, Cyclophoridae, and other groups of land shells.

When Dr. Cooke started work at the Museum, the only land shell collection worthy of the name was Garrett's excellent collection that had been purchased many years before. Literature relating to the mollusks of Hawaii and the south Pacific islands was not available, except in a few scattered papers which came with the Garrett collection and part of Pease's library which had been turned over to the Museum by the Hawaiian Government. The types of the 608 Pacific islands species known up to 1900 were scattered throughout the institutions of the United States and Europe, and many were in private collections.

From the beginning, Dr. Cooke advocated systematic and concerted collecting by means of organized expeditions, and such expeditions eventually added vast quantities of specimens to the Bishop Museum collection. In the Hawaiian Islands, he scoured the countryside for native snails; no simple matter in the early days when one had to travel by foot or on horseback. Altogether he made ten recorded expeditions in the Hawaiian Islands.

In July 1913, in company with Joseph F. Rock, he visited Palmyra Island as the guest of Judge Henry E. Cooper, who had purchased all claims to the atoll, which lies 960 miles to the south by west of Honolulu. Dr. Cooke reported on the expedition as follows (B. P. Bishop Mus., Occ. Papers, vol. 6, no. 1, 1914):

The most important trip of the year was to Palmyra Island. . . . Two or three weeks were spent in preparation for this trip as everything necessary for collecting or preserving had to be taken along. It is needless to say that the trip was a success as twenty-seven boxes and bags of specimens are the result.

Sixteen days were spent on the island and all kinds of specimens of animal life were taken, except birds. Several hundred specimens of coral, crabs, fish, etc., are now in the Museum as a result of the trip. Dr. Clark has kindly consented to name the echinoderms

collected. The rest of the specimens collected will have to be referred to specialists. Of the land-shells only three specimens were found. Two species were very common and the third extremely rare. Undoubtedly all of the species were accidentally introduced by man when the coconuts were taken there for planting. . . .

Mr. Rock published a detailed description of the flora, together with notes on the animal life, geography and history.



DR. COOKE ON NECKER ISLAND (TANAGER EXPEDITION, 1923).

In 1923 Dr. Cooke went on the third trip of the *Tanager* Expedition, which took a party of scientists to Nihoa and Necker Islands. And in 1924 he took part in the second trip of the *Whippoorwill* Expedition, acting as chief of the party which visited Baker and Howland Islands.

Dr. Cooke was also connected directly or indirectly with six major expeditions to other Pacific islands.

During February and March of 1926, with A. F. Judd, he went on a collecting trip to American Samoa. He wrote as follows in the Report of the Director for 1926 (B. P. Bishop Mus., Bull., vol. 41, 1927) :

The object of the trip was primarily to obtain a knowledge of the problem of distribution (both lateral and longitudinal) of land snails on the island of Tutuila, also to collect topotypes of species reported from Tau by Gould and by other authors from Tutuila. In collections, the trip was most successful. Nearly 40,000 specimens were collected on the islands of Tau, Ofu, and Tutuila, and material is now available for comprehensive study of variation and distribution of species. An analysis will give a fair idea of the number of endemic species, of those brought by the early Polynesians, and of others introduced through modern commerce.

Dr. Cooke headed the Henry G. Lapham Expedition to Fiji (1938). With Elwood C. Zimmerman as entomologist and with me as assistant malacologist, we left Honolulu in June for a three months' collecting trip. However, Dr. Cooke was called back to Honolulu within a few weeks.

The Mangarevan Expedition of 1934, which was a six months' survey of the islands of the southeastern Pacific, was led by Dr. Cooke who had long planned such an expedition. An account of it appears on pages 13-23.

Dr. Cooke knew most of the early land shell collectors of Hawaii and just how complete their collections were and how valuable scientifically. And he was eventually able to acquire the most important of these through purchases, as gifts, or through exchange. Among them are those of Ancey, Baldwin, Emerson, Gulick, Judd, Lyman, Meinecke, Oswald, Russ, Thurston, Thwing, and Wilder.

Many other additions to the collection came to the Museum from personal friends of Dr. Cooke, some of them confirmed shell collectors, others casual collectors. Thus numerous early collections were contributed by Davis, Deverill, Fleming, Fraser, Forbes, Greenwell, Horner, Knudsen, Lemke, Meinecke, Newcomb, Rock, Spalding, Thaanum, von Holt, Wishard, Waterhouse, and others.

Dr. Cooke never missed an opportunity to perform what he called "missionary work" when travelers to other parts of the Pacific stopped in Honolulu. He transmitted to them his great enthusiasm for land shells and supplied them with vials, labels, and instructions for collecting and preserving the snails. Thus samples of shells came in from the New Hebrides, the Solomons, the Bismarcks, New Caledonia, the Cook Islands, and Tonga—all islands where little collecting had been done previously.

Through his exchange plan with other institutions, the Museum not only received specimens valuable for comparative studies, but was able to deposit duplicates of many species in at least one other institution, thereby safeguarding them in case of damage to one set. Many exchanges were made with the Academy of Natural Sciences at Philadelphia and the Museum of Comparative Zoölogy at Harvard University.

During the long period which he spent building the shell collection Dr. Cooke also preserved the soft parts for future study, making the collection doubly valuable. Regarding this far-sightedness, H. B. Baker has this to say: "... it is the only museum where a large majority of the shell lots are accompanied by preserved animals, which makes possible systematic studies on the entire organism, instead of those based only on its relatively simple exoskeleton."

COOPERATION WITH OTHER INSTITUTIONS
AND WITH INDIVIDUALS

Dr. Cooke believed fully in scientific collaboration. He recognized that a knowledge of the distribution and relationships of the Pacific land fauna involved critical observation of forms and habitats on scores of scattered Pacific islands and that laboratory investigation must be done on diverse problems which required the attention of qualified specialists. He also realized that the task was too great for one man, or even for one institution. Thus he lent his whole-hearted support to organizations designed for cooperative work. He was one of the founders of the Pacific Science Association and for many years the official Council member from Hawaii, hence a leading participant in the Pacific Science Congresses. He was a delegate to the second Congress, held in Australia in 1923; to the third Congress, held in Japan in 1926; to the fourth, held in Java in 1929; and to the sixth, held in Berkeley, California, in 1939. He was also Chairman of the Standing Committee on Distribution of Terrestrial Faunas in the Inner Pacific.

For such team work Dr. Cooke was remarkably well-fitted. Outside of Hawaii he maintained contact with his fellow members in such famous institutions as the Academy of Natural Sciences at Philadelphia; the American Museum of Natural History, the Zoological Gardens, and the Academy of Science at New York; the Malacological Union; the Malacological Society of London; and the Natural History Museum of Vienna. He thought of himself and his collaborators as friends working together on a congenial task. He minimized his own contributions and praised those of his associates regardless of whether their views were in accord with his own. His most fruitful working associations were with Addison E. Verrill, Yale University; Henry A. Pilsbry, Academy of Natural Science in Philadelphia; Henry E. Crampton, Columbia University and American Museum of Natural History; Horace B. Baker, University of Pennsylvania; and William J. Clench, Museum of Comparative Zoölogy of Harvard University.

When Professor Verrill, who was Dr. Cooke's instructor and fellow worker at Yale and his revered guide on collecting expeditions along the Atlantic seaboard and in Bermuda, visited Hawaii in 1924, their friendship and scientific relationship were renewed. Professor Verrill collected for Bishop Museum during his visit and gave freely of his ideas regarding working methods and publications.

With Dr. Pilsbry, Dr. Cooke's professional and friendly association began in 1900, growing closer with the passing years and developing into full-scale cooperation in research and publication. Dr. Cooke spent much time in Pilsbry's laboratory at the Academy and Pilsbry, in turn, worked at Bishop Museum. The results of this association were published in the volumes of the

Manual of Conchology and included the critical revision of names in the Helicinidae, the erection of the genera *Partula* (s.s.), *Samoana*, and *Eua* in Partulidae on the basis of anatomical studies. On the recommendation of Dr. Cooke, Dr. Pilsbry was appointed Consulting Malacologist on the staff of the Museum, a position which he has held since 1940.

The association between Professor Crampton and Dr. Cooke began in 1909 when Crampton stopped in Honolulu to study the Partulidae collection in the Museum, particularly that contained in the famous Garrett collection. Their friendship and working relationship continued over many years. They collaborated on a paper in 1930 and began another on the new species collected by the Mangarevan Expedition which Crampton completed in 1949 at the Museum. Professor Crampton has been an Associate in Malacology on the Museum staff since 1920.

During a 1920-1921 study trip to the Academy of Natural Sciences at Philadelphia, Dr. Cooke worked with Dr. H. B. Baker on snail anatomy. This was the beginning of a most profitable association, which ended in Baker's research on the Pacific Zonitidae. Dr. Baker, who was granted a Yale-Bishop Museum Fellowship, spent about six months in Hawaii in 1935 and later produced three volumes based on his work at the Museum (B. P. Bishop Mus., Bulls. 158, 165, 166). Dr. Cooke often expressed great satisfaction in the fact that "Baker straightened out the zonitid mess." Dr. Baker has been a Bishop Museum Associate in Malacology since 1940.

The professional association of Dr. Cooke and W. J. Clench began in 1923. During the ensuing quarter century working relationships became increasingly cordial, culminating in Mr. Clench's Yale-Bishop Museum Fellowship (1940-1941) for the study of the Cyclophoridae and Synceridae in the Museum. For both the Museum of Comparative Zoölogy and the Bishop Museum this association resulted in a profitable system of exchange of Pacific island land mollusks. Mr. Clench has been Research Associate in Malacology on the Bishop Museum staff since 1941.

RESEARCH

Much of Dr. Cooke's time in the laboratory was spent on his own special type of research, the kind he enjoyed the most, in which he studied the species of each group minutely and carefully and arranged them in the exact order of their relationship, leaving pertinent notes with each. This material he left for future workers to name, describe, and publish. Though his colleagues urged him time and again to publish the results of his research, he was convinced that future specialists could do the writing more competently than he. He felt that the large shell collection could easily take up the time of three generations of malacologists and that he himself had so much to do with so

little time in which to do it that he was unable to spare time for writing, an occupation which he heartily disliked. He was content that future workers reap the harvest of his work.

However, his own publications were not inconsiderable. His first paper (1903) dealt with the distribution and variation of *Achatinella multizonata* on one side of Nuuanu Valley. Thereafter, he published various short papers on *Leptachatina*, *Amastra*, *Tornatellina*, *Achatinella*, *Partula*, *Helicina*, *Succinea*, the pupillids, and the zonitids, as well as a botanical report on Hawaiian Hepaticae. His larger works consist of a paper on *Carelia* and volumes on Amastridae, Achatinellidae, Tornatellinidae, and Pupillidae, in collaboration with Pilsbry and published in the Manual of Conchology; and he was more proud of his co-authorship with Pilsbry than of any paper written alone. In later years he co-authored papers with Crampton and Clench on *Succinea*, *Partula*, and the syncerids.

Two manuscripts which were in preparation at the time of his death were monographs on Endodontidae and Diplommatininae. The figures for both were then complete, but the descriptions must be finished.

Since his death, several manuscripts have been found, some of them in shell trays. Three of these are: "Partulidae of the Marquesas Islands," "Land shells of the leeward Hawaiian Islands," and a history of Hawaiian land shells. These buried manuscripts show his great reluctance to publish in a hurry. He liked to allow a five-year period to elapse between writing and publication to give himself an opportunity to modify his conclusions in the light of later evidence.

Dr. Cooke had hoped to do a final revision of the Tornatellinidae with Dr. Pilsbry; but as World War II precluded their working together, he dropped this long-range project in order to complete at least the Rapa Tornatellinidae, taking up those of the surrounding islands in stages. However, as time became less pressing and the interrelationships of the genera of both Tornatellinidae and Achatinellidae became highly involved, the work expanded to a revision and consolidation of the two families.

Some of Dr. Cooke's happiest years were those between 1942 and 1947, when he was engrossed in the study of the family Tornatellinidae, a group endemic to the Pacific, for which research Pilsbry and he had laid the foundation in 1915-1916—planning at that time to revise it later—and for which much material had been collected in 1934. With the animals of most of the species ready for study, we started the revision in 1942 and were richly rewarded by many new discoveries when the relationships between groups gradually took shape. The work which he had originally planned only for the Rapa Island tornatellids (tornatellinids) eventually expanded to include every genus of the family from Hawaii, Juan Fernandez, the Marquesas, and other

islands, even the Bonins. When he finally understood the ramifications of the family he felt well repaid for the years of patient collecting on this, his favorite, group. However, he hesitated long over the final integration—writing, polishing, and publishing—for he was afraid that the paper would upset Pilsbry's classification. But Pilsbry wrote in 1944, urging Dr. Cooke not to delay the paper and reminding him that the 1915-1916 monograph was only a clarification of earlier works and a preparation for vast changes in the future. Thus for the ensuing three years Dr. Cooke laboriously ground out the main part of the manuscript in longhand.

In 1947, when he went to Yale for the fiftieth reunion of his class (1897), he stopped in New York, where he and Crampton renewed their interest in Partulidae. They had a lively discussion of the high-altitude and thin-shelled species of *Partula* and debated the question of whether these species would show similarity in anatomy. In a letter, he outlined the anatomical project to me, so that when he and Crampton returned to Honolulu they could see the results, results which neither he nor Crampton expected, as it turned out. Dr. Cooke found the distribution of these anatomical types which we may tentatively call genera and subgenera to be puzzling; but he had the satisfaction, after 40-odd years of saving animals, of knowing the anatomy of all the families of land shells characteristic of the Pacific region.

MANGAREVAN EXPEDITION

For many years Dr. Cooke envisioned a voyage of scientific exploration in the Pacific. It was his ambition to take a party of botanists, entomologists, ethnologists, and malacologists through the little-known islands of Polynesia to study the main island groups and make reconnaissance collections. This plan was thoroughly discussed with Dr. H. E. Gregory, then Director of Bishop Museum, and with his friends from affiliated institutions in Hawaii and on the mainland, in an effort to anticipate every contingency. Finally, in 1934 at the age of 59, an age when many persons might have given up such a strenuous ambition, he was appointed leader and director of the Bishop Museum Mangarevan Expedition, which was to visit the Society, Mangarevan (Gambier), Austral, and many other islands in southeastern Polynesia. His ship was much smaller than the one he had envisioned and not quite the floating laboratory he had planned, but it was fast and suited to its purpose.

As most of the inhabited islands of southeastern Polynesia are visited infrequently by commercial ships, the uninhabited islands not at all, it was necessary to provide the Expedition with a means of transport that would serve also as a base for supplies. For navigating these unfamiliar waters and landing on harborless atolls and ragged volcanic masses, success and safety depend in no small degree on the type of ship selected. Speed, shallow draft,

and the ability to withstand sudden violent winds are essential. As a ship designed to meet these requirements, the *Myojin Maru*, renamed the *Islander*, was chartered. It was a converted sampan 87 feet long with a gross tonnage of 75 tons and a draft of 6 feet, equipped with a 200-horsepower Diesel engine and a radio.



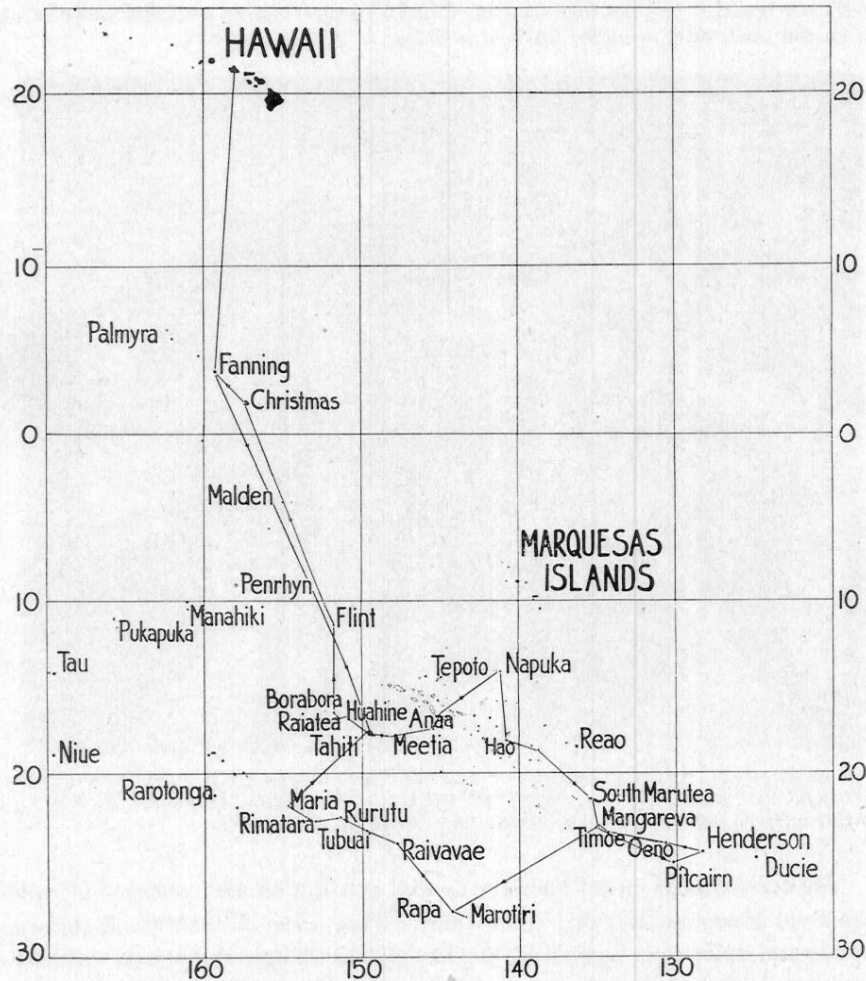
THE MYOJIN MARU, OR ISLANDER, AS SHE HEADED OUT TO SEA.
(PHOTOGRAPH BY E. H. BRYAN, JR.)

To fit the *Islander* for use by the Expedition, extensive alterations were made in her hull and superstructure, including the reinforcement of the frame, the enlargement of the deck, and the construction of a drying room for plants and compartments for storing supplies, specimens, and duplicate equipment. Most important to the members of the Expedition was the cabin, 11 by 14 feet, constructed amidships. This small space constituted the only quarters for sleeping, eating, and working. Of the eight bunks provided, five were occupied by the scientific staff and three were used for storing apparatus. The crew was provided with even more cramped quarters below deck.

The Expedition was made possible by contributions from the Rockefeller Foundation, the Hawaiian Sugar Planters' Association, the Charles M. and Anna C. Cooke Trust, the J. B. Atherton Estate, and individual friends of the Museum.

Departing from Honolulu on April 15, the converted sampan covered 9,000 miles in about six and a half months. It touched at 25 high and 31 coral islands, returning on October 28 with its holds crammed with the treasures of natural history.

The scientific party on the *Islander* consisted of C. Montague Cooke, Jr., and Donald W. Anderson, malacologists; Harold St. John and Raymond F. Fosberg, botanists; Elwood C. Zimmerman, entomologist; and (on the route



MAP OF EASTERN POLYNESIA, SHOWING THE ROUTE OF THE *ISLANDER*.

from Honolulu to Napuka) Kenneth P. Emory, ethnologist. However, members of the crew were also enthusiastic collectors. Dr. Cooke, in his report of the expedition (B. P. Bishop Mus., Bull. 133, p. 55) wrote as follows:

One of the chief factors in the success of the trip was Captain Anderson's ability as a navigator and his previous experiences on similar islands. He made safe landings which, to me, appeared impossible.

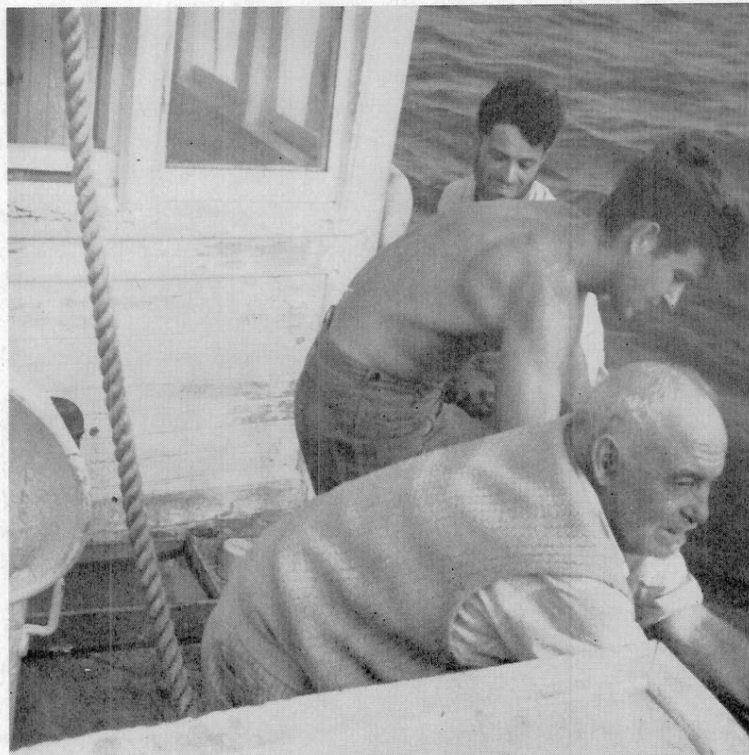
The crew assisted us in making collections, two or three of them showing especial interest. Landshells were collected by nearly everyone. Yoshio Kondo, one of the crew, showed great interest and, after the first few weeks, was a regular collector except when necessary work on the boat interfered. Much of our success in collecting minute species is due to his interest. Sam Wight also made collections of plants, especially on some islets which our botanists had not time to visit. Clifford Gessler became a regular collector of plants and shells after rejoining the boat in Tahiti.



PART OF SCIENTIFIC PARTY ON THE DAY MANGAREVAN EXPEDITION LEFT HONOLULU, APRIL 15, 1934. LEFT TO RIGHT: DR. COOKE, HAROLD ST. JOHN, KENNETH P. EMORY, RAY FOSBERG, AND DONALD ANDERSON.

The crew was of mixed ancestry as well as vocation and consisted of eight men from Honolulu and two from Tahiti. They were William G. Anderson, captain and radioman; Samuel G. Wight (retired rancher and prison warden), mate and doctor; Alexander R. Anderson, second mate; Enos K. Lyons, third mate and engineer; Yoshio Kondo, chief engineer; Clifford F. Gessler (newspaperman and poet), seaman; Alexander W. MacDonald (newspaperman), seaman; Ernest H. Fernandez (surveyor), chief cook; Tani, seaman and cook; and Reao, seaman. There was no strict division of labor, a fact which undoubtedly contributed to a relatively smooth running crew. Dr. Cooke, Zimmerman, and Gessler often spelled us at the steering wheel, whereas we, in turn, acted as assistants to the scientists. Sam was a resourceful forager and the company can thank him for not going on short rations many a time.

Enos, or "Enoka," was always cheerful and heartily cooperative and kept everyone in a happy frame of mind. Ernest was a cook in name only, but he did manage to put things together after a fashion; and what better appetizer than slashing through jungles and climbing mountains? Actually, the cook had a sizable staff of assistants, at one time or another being assisted by Tani, Sam, Enoka, Zimmerman, and Dr. Cooke. None of us will ever forget the delicious wahoo chowder prepared by the Boss at Fanning. Dr. Cooke was a man of many talents, and a good sailor; during the stormy passage between Pitcairn and Henderson Islands he and the engineer were the only ones not seasick.



THE BOSS LENDS A HAND ON THE ANCHOR CHAIN OF THE ISLANDER AT HENDERSON ISLAND. IN THE BACKGROUND ARE ELWOOD C. ZIMMERMAN AND RAY FOSBERG.

As far as malacology was concerned, the Expedition might have been called "On the trail of the Tornatellinidae," the family of land shells which was Dr. Cooke's specialty. In 1837, Henrich Henrichsen Beck mentioned the genus *Tornatellina*, with four species from Rapa (Opara) and the island of Juan Fernandez; and in 1839, Herman Edouard Anton listed seven more species from the same islands. Later, the number of species taken grew in

quantity and there was much confusion regarding their interrelationship and the exact collection localities, for the early collectors were exceedingly careless about exact localities and the spelling of place names. Apparently such locality information as "Islands of the Pacific," "Sandwich Isles," and "Society Group" seemed sufficient, and obviously early conchologists confined most of their collecting to the vicinity of principal villages or watering places. In an attempt to bring order out of chaos, Pilsbry and Cooke had, in 1915-1916, published a monograph on the family; and later (1921), Nils Hj Odhner of Sweden did much toward defining the species from Juan Fernandez. It was Dr. Cooke's intention to further straighten out the confusion in this family during the Expedition.

He expected much material from the Mangarevan Islands, but the almost total destruction of its native forest by fire had also destroyed the native fauna and fossil shells were about all that could be salvaged in 1934.

Fortunately, much of the native forest on the critical island of Rapa was intact in the higher altitudes. It was here that Dr. Cooke hoped to collect specimens of many critical species of land shells, not only to fix their homeland, but to determine their relationship with each other and with shells found in other parts of the Pacific. Probably the most important of the Tornatellinidae which he hoped to find living was a minute shell known as *Pitys pagodiformis*, the shape and ornamentation of which were so peculiar that at one time it had been placed in the family Endodontidae. Next to these in importance were *Strobilus turritus*, *Lamellozum globosum*, and *Tornatellina trochlearis*. He hoped also to find various species in other families, among them *Microcystis ornatella*, "*Partula pacifica*," and *Cyclomorpha margarita*. So infectious was his enthusiasm that all members of the party and crew brought him shells daily. To further spur his colleagues, he offered 15 francs for the first specimen of *P. pagodiformis* collected, later increasing the reward to 25 francs.

Customarily, when a rich colony was discovered, Dr. Cooke set 100 as the goal, and an exciting hour followed as the collectors yelled the ever mounting numbers to each other.

Although nearly every day we spent on Rapa was rainy and cold, Dr. Cooke started forth in his battered old hat, a special multi-pocketed collecting coat, and a pair of high boots, puffing away at a much repaired pipe. He always took me along as a helper and companion, the rule being that no one should go anywhere alone, in case of accident. While the others rushed off for the highlands, we collected at a leisurely pace in the low and medium altitudes. In spite of the cold weather, when often his fingers were so numb that they could scarcely pick up the minutiae, all of Dr. Cooke's days on Rapa were extremely

happy, for they were continuously punctuated by thrilling shell discoveries, as attested by the following field note made on July 2.

292. 100 yds. more or less above and at about 75 ft. higher elevation than 291. Most of *M. ornatella* taken on ferns and *Piper* sp.; one large tornatellid on underside of green "ti" leaf. Other large tornatellid taken by E. Zimmerman in beating for insects. *Strobilus* taken in abundance under stones and dirt. Other shells taken under stones were *Endodonta*, *Omphalotropis*, *Helicina*. One *Partula* taken on trunk of *Celtis* tree. *Elasmias* taken on coffee and *Piper*. *Helicina* taken on *ieie* (*Freycinetia*) and turmeric. One *Pro-nosopupa* (?) on leaf on green *Freycinetia*.

Because its habit was unknown, *P. pagodiformis*, then known as *Diglyptus*, was thought to be a rare shell. It was collected in disappointingly small series of twos and fours. Three were collected on July 2 when the following field note was made:

293. About 100 yds. below cliff, in native forest. *Diglyptus pagodiformis*, several *Tornatellids* under stones also *Atropis*, etc. *M. ornatella* on shrubs and ferns.

Three important habits of critical species were recorded on that day: those of *Strobilus*, *Partula*, and *Pityis*; and they differed so radically from those of the Hawaiian shells that their significance was not seen until much later.

Five more *P. pagodiformis* were found by Donald Anderson on July 4, and on the 12th he returned with 10 specimens collected under a pile of stones. This was the clue Dr. Cooke had been waiting for and which he proceeded to test on the 15th with highly satisfactory results, as witnessed by the quoted field note:

382. From about 250'-450' el. on small ridge west of church [of Area Village] . . . CMC collected a little over 50 specimens. All of these except 3 specimens under stones, 1 spm. taken on a very damp rotten leaf; 2 spms. under rotten wood. Most of the specimens came from the 2nd and 3rd layer of talus. A few spms. taken on the underside of the top layer of talus. Most of the specimens taken under very rough stones and were very difficult to see. Probably more than 75 good-sized live specimens. My 50 specimens came from a space about 4 × 10 ft. and took nearly 3 hrs.

The total catch of three collectors—Dr. Cooke, Don Anderson, and me—was 58 living and 179 dead shells, an excellent haul.

On July 15, Don Anderson found the true habitat of the Rapa *Partula*, the uppermost limbs of *Celtis* trees, which are about 30 feet high. Together we bagged 27 specimens, which we considered a huge series as the usual number found was about half a dozen. But during our last day on Rapa (July 31) Anderson, aided by two native children, got a total of 97 specimens on Mount Tanga.

Lamellovum globosum and most of the other species Dr. Cooke hoped to find, as well as numerous new forms, were found in great numbers almost everywhere. Thus, with the finding of *Partula* and *Pityis* in good series, Dr. Cooke's requirements were narrowed to three important species, *Cyclomorpha margarita*, *Tornatellina trochlearis*, and *Strobilus turritus*. These also were collected in small numbers at first because their true habitats were unknown.

On July 18, with little hope of any startling discoveries, Dr. Cooke and I took a path leading to Titikaveka, a small rise behind the village of Ahurei, which was completely denuded of native forest. As we walked up the bed of a small stream, we noted numerous moving pellets of dirt on the moss and small plants along the banks. They were specimens of *Cyclomorpha*, which cover themselves with dirt, the habitat of which had eluded us for half a month. Once this discovery was made, dozens of them were seen and many found their way into collecting vials.

On this July 18, fortune really smiled on the Boss, for he had a second memorable experience. After emerging from the "*Cyclomorpha*" stream, we climbed up a low, flat ridge covered with grass and some clumps of ginger shaded by a puny kukui tree, under which we sat for a well-earned smoke. Never one to remain idle, Dr. Cooke cleared away a small patch of grass and dead leaves and gave the soil surface a good rubbing. Almost immediately he forgot the pleasure of smoking his pipe, for the soil came alive with minute, elongate shells which crawled out of the granular layer and moved every which way, their tall shells waving from side to side ludicrously. He had disturbed a large colony of *Strobilus turritus*, the habit of which he was never certain of until then. Altogether, 58 specimens were picked up and put into vials by means of grass stems moistened with saliva. Nearby areas were searched with poor result, confirming Dr. Cooke's life-long belief that land shells are not distributed uniformly over a large area but exist in small groups known as colonies.

Dr. Cooke regretted the fact that he could not accompany St. John, Fosberg, Zimmerman, and Anderson in their mountain trips, for they continuously brought back new and strange species. However, he was compensated by personally discovering the habitats of many of the critical species. Thus it was that he investigated the guava shrubs near the village of Ahurei and not only found the much-desired *Tornatellina trochlearis* crawling on the shrubs, but other species of the genus, too, which came as a surprise to him though guava is a familiar host plant in Hawaii.

A few of the other species of land shells found are worthy of mention. Deep in the valley of Maitua, Dr. Cooke pulled apart a pile of rocks below a cliff and found a large colony of tornatellids that resembled some of the species of Hawaiian *Auriculella*; but they were actually new to science. Of these he collected an excellent series of 300. And on their trips to the summit of Mount Perahu, the hikers brought back several strange tornatellids, one of which was the largest ever taken anywhere in the Pacific. Upon study at the laboratory later, these also turned out to be genera new to science. A series of water-loving tornatellids were collected on some cliffs, a habitat entirely new to Cooke. These were later found to constitute another genus. And in the cracks

of the bark of the *Celtis* and a few other trees, still another genus of tornatellid snail made its home. Altogether, the snail fauna proved to be extremely rich and the month's stay on Rapa was highly profitable not only in land shells but in plants and insects.

On a Sunday and the calmest day of our stay in Rapa we made a trip to Marotiri Rocks, 40 miles away. In addition to some good collecting we caught a ton of large fish, most of which were given to the natives. However, the parson was very angry with the two natives who accompanied the ship and thus broke the sabbath, and he excommunicated them. But, to Dr. Cooke's delight, he took one of the largest fish for himself.

The industrious natives were greatly admired by Dr. Cooke who wrote about them as follows:

On the way home we caught up with a large bunch of coffee pickers. The women are husky and very strong. They are not good looking and are far more industrious than the men. From the way they laugh, in making remarks about us, their jokes must be on the shady side.

When we got to the top of the pass we met 3 young women and a young girl coming home, each with a load of taro. Sam lifted one of the loads and estimated it weighed between 110 and 120 lbs. He couldn't lift it except by straddling the load. The girl carrying this was a husky and said she was 17 years old. Pretty good load to carry down a trail no better than a goat trail and very steep and slippery in spots. She had carried this load up the ridge of one of the valleys of Hiri. The pass she was crossing was about 800' above sea level. Sam estimated the pack carried by the 10 year old girl at about 40 lbs.

Nearly the whole village turns out every day, rain or shine, to pick coffee, work in the taro patches, gather wood or bring in bananas. The heavy work is done by the women. The men do fishing, etc.

They are most generous if we give them a couple of needles or a little candy or a few pins. They come out in their canoes with a bundle of taro or a bunch of bananas, or a basket of oranges.

The natives, in turn, admired Dr. Cooke; and the children were thrilled beyond words when he once performed a simple sleight-of-hand trick for them, pushing a pebble into his ear and pulling it first out of his mouth, then out of his umbilicus. The youngsters sped into the village to bring back a horde of other children and adults to see the show. The excited jabbering which followed no doubt referred to Dr. Cooke as a great *tohunga*, or witch doctor.

On July 30, the day before our departure from Rapa, Dr. Cooke looked up from a nearby collecting spot to see the stern of the ship burst into fire. One can imagine his agitation as he hurried toward the jetty and the valuable cargo of specimens. Fortunately, the fire was put out in a matter of minutes with only the loss of a few botanical specimens, for it was the plant-dryer that had started the blaze. This was the only near-disaster of the Expedition.

The party left Rapa on August 1, to visit the rest of the Austral Islands. Our supplies had begun to run short and we had to live off the land in earnest,

but we had ample protein food—goat, rabbit, chicken, duck, and fish—complemented by plenty of taro, poi, bananas, and coffee.

For the natural scientists, the rest of the voyage was an anticlimax. No other island proved as rich as Rapa. However, a new species of *Partula* was discovered on Raivavae and some new and strange zonitid snails were collected on Rurutu. And fairly good collecting was had on Tubuai, where we got some specimens which were to provide the key to one of the most complicated tangles in tornatellid nomenclature.

At Tubuai Dr. Cooke received the sad news of his mother's death, but never did he burden his colleagues with his sorrow.

Between the Australs and Tahiti it was discovered that we were short of fuel, and everyone was cautioned not to breathe a word about the shortage to our leader. While he slept in his bunk, the crew gingerly tried to pump out the dregs from the almost empty fuel tanks which were located near and below him. When the grinding sound of pumping awakened him, he walked out of the stuffy cabin to have a pipeful of tobacco. The strange silence of the men and the unusual nocturnal activity immediately told him the situation. How he felt about the conspiracy to keep the problem from him is not known, but he helped "squeeze" the ship into Papeete during the night, with a few gallons of fuel to spare.

At Tahiti the ship was refitted, fueled, and provisioned for the exploration of the Society Islands and the long voyage home. And though Dr. Cooke had personally assumed the financial responsibility for the remainder of the Expedition, he generously provided each of the crew with money for purchasing a few necessities and some curios. He also shipped enough cigarettes to last them for the remainder of the trip. Tobacco had given out on our arrival at Rapa and he had been doling cigarettes to the crew from his own small supply for three months.

The survey of Tahiti, Moorea, Huahine, Raiatea, Tahaa, and Borabora resulted in the collection of numerous species, both known and new. One of the exciting events of the homeward voyage was the finding of *Partula turgida*, a delicate snail the color of old gold, so rare that it eluded us until the last day on Raiatea. The Boss had again offered a reward of 15 francs, which was boosted to 25 on the last day. The colony which we found lived in a small, restricted area, and only 14 adults and 47 juveniles were captured to be added to the lone specimen in the Museum. The chief conclusion reached after this reconnaissance was that the highlands of this group of islands needed systematic exploration by small parties who could stay on each island for periods of one to three months.

The return voyage was uneventful, but at Christmas Island Dr. Cooke landed an *ulua* (pompano) weighing 105 pounds which served to vary our usual shipboard diet of corned beef.

The Mangarevan Expedition was highly successful, particularly in the manner in which it was directed. Dr. Harold St. John, botanist on the expedition and second to Dr. Cooke in seniority, has written the following tribute to our leader:

Before 1934 I had liked Dr. C. M. Cooke, Jr. as a man and respected him as a scientist. The seven months on the Mangarevan Expedition gave me continual intimate contact with him. As leader of the natural history expedition, he was responsible for its itinerary, plans, and the thousand details needed to make the trip run. It was the realization of his life ambition to explore the distant islands of Polynesia for land shells, and he did it with a zest and infectious enthusiasm that led others from the staff, the crew, and local residents to help him. His authority as leader was not exercised arbitrarily, but after consulting the other scientists and the captain, he would announce details of the plans. He always had time to listen to his companions and sought ways of helping and obliging them. He was the oldest in the party, yet constantly his thoughts were as to how he could help someone else, quietly and unobtrusively. I have never known a leader or administrator more thoughtful, considerate and kindly than Dr. Cooke. Before the trip I liked him, but during and after it I liked and revered him.

DR. COOKE AS HIS FELLOW WORKERS KNEW HIM

Dr. Cooke was loved by his associates at the Museum for his great kindness and generosity toward all of his fellow workers, for his intense loyalty to the Director and the institution, for his enthusiasm for his own work, and for his whimsical humor. It is, perhaps, his delightful sense of humor which comes to mind most frequently. Practically every old-timer on the staff had a favorite story about Dr. Cooke. With so few of these old-timers left, I have found it difficult to gather such anecdotes; but a few remain.

Dr. Buck's favorite story was about the time that Dr. Cooke gave a talk on cattle breeding. After telling at length about a fabulous cow which produced great quantities of high grade milk and giving many statistics as regarded her lineage—a most scientific talk—Dr. Cooke stopped as if finished. Then he looked squarely at his audience and added, "Her name is Kate."

Dr. Charles H. Edmondson recalls with delight the first time that he met Dr. Cooke, at the latter's Laie country home, when he came out to meet his guests in old clothes and his bare feet.

Mrs. Muriel Blackman, one time Secretary at the Museum, told an equally amusing story of her first encounter with Dr. Cooke. When she and her husband arrived at the dock in Honolulu, they saw a disreputable-looking character picking up shells along the wharf and she remarked to her husband that that must be a beachcomber. Her shock was considerable when she was later introduced to the distinguished Dr. Cooke.

Over a period of many years Dr. Cooke was a Trustee and occasionally the Acting Director of the Museum. As a staff member, as Acting Director, or as a friend, he would listen to anyone on any subject concerning the Museum

or personal problems, but never as a Trustee. Neither would he make a decision upon any matter on which he felt he and the Director might differ.

He took a fatherly interest in junior members of the Museum staff. In 1929, when E. H. Bryan, Jr., Curator of Collections, was granted a six months' leave of absence for graduate studies at Stanford University, Dr. Cooke said to him, "Make the most of your trip, and if you need anything, just let me know." The meager salary allowance was not sufficient to cover expenses in California, and Bryan finally called on his generous friend for assistance. On December 31, 1929, Dr. Cooke wrote:

Dear Eddie, Enclosed please find draft for \$300. . . . Things are going fine at the Museum. My being a Trustee has speeded up the work rather than lessened it as I stipulated that the whole of my salary should be spent on my department and this has given me additional assistance. I am nearly settled in my new quarters which are a joy. Will be glad to see you back again in April. Cordially yours, C. Montague Cooke, Jr.

Dr. Cooke's relationship with his own staff was a happy one. He was always kind, considerate, helpful, patient, and loyal to a fault. Once an assignment was given to an assistant, he did not meddle; if he were especially concerned about it, he would discuss it only after courteously obtaining his helper's permission to intrude. An assistant was always thanked appreciatively for work performed, and if he lagged in his work he knew he would receive sympathy rather than a rebuke. Dr. Cooke commanded the complete loyalty and affection of his staff, inspired them in their work, and acted as father confessor.

After the Mangarevan Expedition, Dr. Cooke was affectionately known as the Boss among those who had shared the Expedition with him, and later among those closest to him at the Museum.

For many years the Boss arrived at the laboratory promptly at 7:30 in the morning. It took him a minute to change from his meticulously neat and conventional clothes to a comfortable old pair of khaki trousers and an ancient blue shirt, which of late years he replaced with gaudy aloha shirts of brilliant green or red Tahitian print; and to light his first pipeful of tobacco. He loved his pipe, which was a permanent part of his physiognomy until he voluntarily began to cut down his smoking for the sake of his health. Fresh and burnt tobacco flakes are still found in many of the shell trays. On the window ledge over his work table he kept 14 old pipes which were used consecutively, one each day over a two-week period. He regarded all of these old friends, one of which he had carved while he was in college, with the greatest affection. When one was misplaced, there was a general disruption of routine while his assistants went on a pipe hunt.

Dr. Cooke tried to keep a stock of cigarettes on hand for his visitors, but often he was in short supply. This led to the episode of the corncob pipes, another example of his sense of humor. He bought about a dozen corncob

pipes which he solemnly offered to his guests, male or female. Once, when an Assistant Ethnologist on the staff went to confer with Dr. Cooke he found his wife, who was an assistant to Dr. Cooke and an inveterate cigarette smoker, puffing contentedly on a corn-cob pipe.

Once his pipe was lighted, Dr. Cooke was immediately immersed in his shell work, and his concentration was such that none of the ordinarily distracting noises reached him. He never tackled more than one project at a time, and to each he gave his fullest attention. Next to shell work, his greatest enjoyment was what he termed "detective work," the running down of synonyms and obscure references and poring over old descriptions and trying to fit them to critical species. It took him many years, an expedition, an exchange with the Museum of Comparative Zoölogy, and much of his detective work to unravel the entanglement surrounding *Tornatellina pusilla*, *T. nitida*, *T. serrata*, *T. voyana*, and *T. perplexa*. After so many years of thumbing through reference works such as the publications of Anton, Pfeiffer, the Nautilus, the Manual of Conchology, and the Proceedings of the Zoological Society of London, he could pull the volumes off their shelves almost without looking and instantly turn to the correct page. His remarkable memory also aided him in associating catalog numbers with a collector and with collection data, even when the numbers had approached the two-hundred-thousand mark. These numbers would often remind him of some interesting points connected with the field labels, which he meticulously kept in albums to be used as final arbiters regarding data. Some of his favorite labels accompanied Brazier's specimens, of which the following is a prime example:

BBM 87576, *Helix aspersa* (4 spms.). Hotel Sebastopol, Rue Sebastopol, Noumea, New Caledonia, 1903-4 Menu for Breakfast 1st course *Helix aspersa* specimens had been collected in the Governors Garden about 25 on a glass dish with silver scures for my Friend Monsieur Bouge and Self at another Breakfast we had *Mesoderma striata* about 50 on a glass dish and help yourself Breakfast at 10, A.M. dinner 8 P.M. JB.

Although Dr. Cooke did not discuss shells with his family, he cogitated critical problems far into the night and carried on from there as soon as he awoke in the morning. Weekends were considered a nuisance by the Boss because the smooth flow of his research was interrupted, and he disliked holidays for the same reason.

Much as he hated interruption, he always gave the best of himself to a visitor, whether scientist, collector, colleague, or friend. He would as patiently explain shell collecting to some eager student as he would discuss the problems of distribution and relationship with a zoologist.

When his mail had accumulated into a small mountain the Boss would interrupt his current project long enough to clear it away. He would read all letters first, dictating his replies, then settle down with the periodicals. The papers he read at one sitting, rapidly and thoroughly with such deep

concentration that only the sucking sound of his pipe signified his presence; and his ability to remember pertinent facts was almost phenomenal, even at the age of 70. When an article especially impressed him, he would buttonhole an assistant and give him a review of it and a discussion on the subject. One such article was on the underwater profile of Bikini atoll. His enthusiasm was great, for he had always maintained that drillings of atolls should be made after a systematic pattern to get an idea of the construction of their substrata. It was even greater when submarine islands were discovered in the western Pacific, for he had long advocated a thorough and systematic sounding of the ocean bottoms, especially of the Pacific. This he believed would go a long way toward explaining land shell distribution.

Dr. Cooke's working area was so arranged that a minimum of movement and space was required. Tables surrounded his chair on three sides and a revolving bookstand containing his most frequently consulted references stood at his back. The type and reference collection, working stacks, specimens, catalogs, telephone, pencil-sharpener, and even clothes hangers were all within a few steps of his chair. His desk for many years was a small, crude table where he sat with a hand towel pinned against its side and spread over his lap to catch any falling shells. After the Mangarevan Expedition he added to his work desk the ship's mess table, carved with the initials of all his companions and crew. It is still piled with instruments, vials, discarded shells, letters, a smoking kit, and other paraphernalia just as he used to keep them, in the disordered confusion which was the despair of his secretary, Hazel Brown. This table and its pile of rubbish was the only digression he permitted himself in an orderly, neat, and punctual life. Any comment about it brought the reply, "You should see Pilsbry's desk," and a description of his crony's cluttered work table which he claimed was infinitely worse than his. About once a year the Boss would go through the motions of tidying up, sometimes finding a letter he should have opened months before, but the ship's table would take on its familiar look within a week.

The Boss collected and kept in the laboratory all sorts of containers—glass, wooden, paper, or metal—explaining that he had the "instincts of a pack rat." However, these miscellaneous jars, cans, boxes, and bottles filled many needs in his work, at the same time satisfying his instinct to avoid waste. He used tobacco tins to protect glass vials in the field and found that Alka-Seltzer containers proved the best collecting bottles for *Partula* and *Achatinella*. The glass jars that once contained a cream deodorant he found to be better than any other type for the dehydration of minute snails. The hundreds of cigarette and match boxes lined with two layers of blotting paper were ideal for drying cleaned shells. These containers, saved for him by friends and relatives, so cluttered the laboratory that they were the source of a friendly

feud between him and the former Director, H. E. Gregory, who for many years urged him to send his "pile of junk" to the incinerator. This amiable fencing came to an end when Dr. Gregory had to borrow some boxes for mailing purposes.

The Boss worked with all the windows closed tightly, even during the heat of summer. While everyone else panted and perspired, he worked away at a great rate, occasionally remarking with a chuckle, "What fine weather we are having." Actually, he did revel in hot weather. The slightest draught would start him sneezing and might lead to a tenacious cold that hampered his work for weeks. However, Dr. Cooke possessed more than an ordinary share of good health; he had excellent vision, a good heart, and perfect digestion, so perfect, as a matter of fact, that he often complained that even a glass of water would add to his weight.

Before World War II the shell laboratory was extremely active, especially between 1934 and 1941 when the material from four field expeditions was being processed and added to the collection. During this period of expansion of an already large collection there were five assistants working continuously, with at least one assistant in the field collecting and sending the material back to the Museum to be cleaned and incorporated into the collection.

For such field expeditions he devised compact alcohol boxes that hold mason jars of any size up to half a gallon and adapted World War I army foot-lockers to carry vials and other equipment snugly. These are still good for many years of hard usage in the field.

To keep the material moving as it arrived, Dr. Cooke installed special equipment in the laboratory, most of it designed by him. The conservation of time, space, and material was always foremost in his mind. The Pacific islands land Mollusca being mainly in the one to 20 millimeter class, he devised a modified cabinet system that utilizes a minimum of space and allows a maximum of motility. For larger shells, 48 cardboard units fit snugly into a covered cardboard tray. These trays are stored in stacks seven feet high with 13 open-faced compartments, each capable of holding six trays. For the minutiae, pillboxes fit snugly into the unit cells. For large shells such as *Placostylus* and *Rhyssota*, double or quadruple units are used.

Some of the best time-saving appliances in the laboratory are the three pedally operated water jetting devices invented by Dr. Cooke for cleaning shells of any size. These replaced the old hand-operated rubber bulbs fitted with glass tubes. From early experiments he had discovered that if the snails were drowned for about 12 hours and preserved in 50 percent alcohol the animals were satisfactorily expanded and embalmed for extraction and dissection. Most animals are easily unscrewed out of their shells or merely squirted out by means of a jet of water pointed at the columellar angle. In

stubborn cases, a needle puncture is made somewhere on the spire or within the umbilicus and the animal pushed out by means of a jet of water shot into the puncture. If this does not do it, the shells are soaked in five to ten percent potassium hydroxide, cleaned, and washed in alternate baths of alcohol and water over a period of 10 days.

In conjunction with the jet system, he used low-power dissecting microscopes for segregating, inspecting, or puncturing shells. It is interesting that his method of dissection was shown to and used by the late Dr. Peter H. Buck, formerly Director of the Museum, for the study of plaiting, weaving, and knotting techniques in Polynesian mats, nets, and feather cloaks.

The Boss usually reserved for himself the work of identifying the species after the shells were cleaned and dried, but he often did a share of the cleaning, also, especially if they were shells he was anxious to study critically. His secretary cataloged the shells and soft parts, storing them in trays and jars.

Dead or fossil material was usually given to an assistant to pick out of the debris and segregate into species to be reviewed by Dr. Cooke. Thus he taught beginners to recognize species and at the same time accelerated his own work. One of his cardinal principles of collecting was to always gather a series of "sweepings," dead shells that lay on the ground in goodly number and were swept up with dirt and debris. This gave an index to the species to be found in a colony and sometimes contained species otherwise overlooked by a collector concentrating on living snails. Many shells from certain localities, even whole islands, were from such sweepings. He did not have a systematic teaching method, relying on his assistants to follow the system by which he had studied under Verrill, that of working things out for himself.

Dr. Cooke's invariable routine and his inimitable humor were the daily delight of his staff. At 3:15 he pushed back his ancient chair, the rattle of which announced that it was time to go home, and knocked the ashes from his pipe into a brass urn which gave clanging confirmation of the time. He always looked out the third floor window to wave at Mrs. Cooke or Kawashima, one of whom came daily to drive him home, then loudly proclaimed, "Boudoir's closed," as a prelude to ducking behind a bookcase or shell cabinet to change his clothes. Should he hear his secretary's high heels approaching his dressing room, he called in mock alarm, "Hey! Boudoir's closed!" At 3:25 he plumped his hat onto his head and bade his "hired hands" a cheerful goodnight.

The late Dr. Herbert E. Gregory, formerly Director of Bishop Museum, rounds out this sketch of the life of Dr. Cooke with the following tribute:

MY PERSONAL RECOLLECTIONS OF DR. C. MONTAGUE COOKE, JR.

By HERBERT E. GREGORY

Nothing in my life has brought more happiness and profit than my association with "Monte" Cooke: a half century of personal friendship in a setting of scientific activity. Particularly treasured memories are the student years at Yale, the joint planning of Pacific exploration, and the activities which resulted in giving Bishop Museum an honored place among scientific institutions and thus aiding in establishing Hawaii as a world center for the study of Pacific problems.

In the Graduate School at Yale I learned to respect the intellectual attainments, the working methods, and the unwavering integrity of Cooke, and derived much pleasure from our daily social contacts. We ate at the same table, took walks together, used the same laboratory equipment, and joined in the appraisal—some of it not too flattering—of the professors, the fraternities, the New Haven police, and the athletic teams. A significant feature of our Yale life was membership in the "Beleidigungs Gessellschaft," a hand-picked group of tested, intimate friends of varied scholastic interests, candidates for the Ph.D. degree, whose job was to debunk egos, freely ridicule, never praise, the research work of our associates. It was thought that in making worthwhile contributions, one critical friend outweighs hosts of admirers. In this atmosphere of hilarious and witty interchange of insulting remarks, self criticism and modesty were facilitated; the "kudos hunter" was quite out of place. Also at Yale I learned from "Monte" that Honolulu is another name for Paradise; that Oahu, Maui, Kauai and Hawaii had been designed by the Creator for occupancy by the élite of the human race; and that surrounding these choice spots were thousands of islands that awaited investigation by adventurous souls. Cooke's intriguing presentation of the Pacific as a region of scientific opportunities aroused the interest which led to my visit to Honolulu in 1916 and later to my service as Director of Bishop Museum.

When in 1919 plans for systematic scientific investigation of the Pacific islands were formulated by the United States Research Council in cooperation with Yale University, Cooke shared the view that the first step was to outline the needed investigations, formulate programs for field and laboratory work, and arrange for financial support. To this end he assisted in selecting the distinguished scholars who constituted the historic Pacific Scientific Conference held in Honolulu in 1920, and took an important part in the discussions preliminary to the decisions that American scientific institutions and individual scientists interested in the Pacific should establish and maintain full-scale cooperation unhampered by direction from salaried administrators; and that

this group of volunteers should give chief attention to Polynesia and eastern Micronesia—regions most easily accessible from the American outpost, Hawaii. It was recognized that Honolulu, with its accumulated knowledge of the Pacific, and in particular the Bishop Museum, founded for studies in Polynesia, was the appropriate center of operation, and the hope was strongly expressed that the institution might serve in that capacity.

For the Museum these prospective plans posed serious problems: nothing less than decreasing its administrative overhead, curtailing its normal activities as a place for exhibiting specimens, and allotting the major part of its meager income to the support of scientists, arranging exploratory expeditions, storing and distributing collected material, enlarging the library, and to publication on a large scale. After full consideration the Trustees of the Museum accepted this opportunity to serve, and thereby became the Captain of the Research Council-Yale University-Bishop Museum team, which soon was enlarged and strengthened by affiliation with other institutions and by enlisting the scientific and financial support of many men in countries surrounding the Pacific Basin, with whom working contact was to be maintained by Cooke as the Hawaiian representative on the Pacific Science Council. In the Pacific Science Association Cooke was an outstanding personality. He was a member of the Committee that drafted the constitution, and for several years Chairman of the Committee on Land Faunas. He presented papers and took part in the organized symposia at the Honolulu, Sydney, Tokyo, Batavia, Vancouver, and San Francisco Pacific Science Congresses.

For those concerned with the activities of the Museum, the 1920's and early 1930's were strenuous but happy days. Due in no small degree to Cooke's influence and personal attitude, the rapidly growing staff worked in full harmony, and to conserve funds for research, performed tasks usually assigned to assistants, clerks, and janitors. I recall Cooke's insistence that he share the work of wrapping packages, serving as Sunday guide to exhibits, and keeping the buildings and equipment clean. During these years, the Trustees, represented by such men as Faxon Bishop, Albert Judd, Henry Holmes, George Carter, Richard Trent, and John Clarke, showed their interest by frequent visits to the Museum, inviting the staff to their homes, and by their personal gifts of money—most of them unrecorded.

Approval of the program adopted by the Trustees, and of the activities of the staff, was expressed in individual and institutional financial support from the United States mainland, from Japan and Australia, and citizens of Hawaii to the extent that for some years funds from "outside sources" about equalled those from the Museum's endowment—its normal income. Cooke's zeal in procuring these funds was second only to his devotion to research.

Fortunate indeed is the director of a scientific institution who has such a man as advisor and thoughtful friend.

Bibliography

By WILLIAM J. CLENCH

CURATOR OF MOLLUSKS, MUSEUM OF COMPARATIVE ZOÖLOGY

INTRODUCTION

The following list of titles and scientific names of both plants and mollusks is complete, so far as can be traced, for the work done by Dr. Cooke. He left, however, several manuscripts in various stages of completion, which in time will be published.

The type specimens of most of the species, subspecies, and varieties described by Dr. Cooke are in Bishop Museum and the Academy of Natural Sciences, Philadelphia; but many type specimens were generously donated to other institutions by Dr. Cooke, for his was an exceedingly broad policy. Any type series in sufficient numbers was divided and such duplicates as could be spared sent on exchange or as outright gifts to other institutions. He believed that this policy not only aided other workers in their reference to authentic material but safeguarded type specimens by housing them in various parts of the world.

With few exceptions, the new species described by Dr. Cooke, either alone or jointly with other authors, were based on material from Polynesia and Melanesia, wherein lay his main interest. His knowledge of these areas was profound, and his library contained most of the malacological papers dealing with Polynesia and Melanesia. His collection contained many specimens that had been compared with type material in other institutions. Both the library and the collection were years in the making, and all were available for use by his colleagues and correspondents.

A LIST OF MOLLUSKS DESCRIBED BY C. M. COOKE, JR., WITH THEIR ORIGINAL REFERENCES AND TYPE LOCALITIES¹

- acicula** Pilsbry and Cooke, *Tornatellides perkinsi* subsp., 1915, Manual of Conchology II, 23:225, pl. 49, figs. 3, 4 (Oahu, Punaluu).
acuminata Cooke, *Amastra (Metamastra)*, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 21, pl. 2, fig. 10 (Oahu, Lualualei).
ada Pilsbry and Cooke, *Tornatellides macromphala* subsp., 1915, Manual of Conchology II, 23: 229, pl. 49, figs. 17, 18 (Oahu, Nuuanu Valley, Glen Ada).

¹ Localities, unless otherwise stated, are in the Hawaiian Islands.

- adamsoni** Pilsbry and Cooke, **Lamellidea**, 1933, *Nautilus* **47**: 62 (Marquesas Islands, Uapou, Hakahetau).
- adelinae** Pilsbry and Cooke, **Tornatellaria**, 1915, *Manual of Conchology* II, **23**: 256, pl. 54, figs. 3, 4 (Oahu, Mt. Tantalus, Pauoa slope, Castle Trail).
- Afripupa** Pilsbry and Cooke, 1920, section in *Nesopupa*, *Manual of Conchology* II, **25**: 357. (Sectional type, *Nesopupa griqualandica* Melville and Ponsonby.)
- albocincta** Pilsbry and Cooke, **Amastra**, 1914, *Manual of Conchology* II, **23**: 40, pl. 3, figs. 11, 12 (Molokai, northwestern ravine of Kamalo).
- alexanderi** Pilsbry and Cooke **Sphyradium**, 1906, *Academy Natural Sciences*, Philadelphia, *Proc.* **58**: 216, text fig. 3 (west Maui, Mt. Kukui).
- alexandri** Cooke, **Gulickia**, 1915, *Manual of Conchology* II, **23**: 112, pl. 28, fig. 7 (west Maui, Maunahooma [Maunahoomaha], and Honokowai).
- alloia** Cooke and Pilsbry, **Nesopupa**, 1920, *Manual of Conchology* II, **25**: 321, pl. 29, fig. 10 (Kauai, Hanapepe Falls).
- aloha** Pilsbry and Cooke, **Achatinella apexfulva** subsp., 1914, *Manual of Conchology* II, **22**: 330, pl. 60, figs. 15, 15a, 16 (Oahu, Wahiawa, crest of division ridge between two branches of the Kaukinehua [Kaukonahua] Stream).
- alpha** Pilsbry and Cooke, **Helicina laciniosa** var., 1908, B. P. Bishop Museum, *Occ. Papers* **3** (2): 203, fig. 5 (Oahu, Mt. Tantalus).
- amoi** Cooke and Clench, **Succinea**, 1945, B. P. Bishop Museum, *Occ. Papers* **18** (8): 135, fig. 3 (Society Islands, Tahiti, Papenoo Valley, slope of Mt. Orofena).
- amphodon** Cooke and Kondo, **Elasmias**, 1943, B. P. Bishop Museum, *Occ. Papers* **17** (21): 263, fig. 1, *a, b* (Austral Islands, Rurutu, Mt. Manureva).
- anaglypta** Cooke, **Amastra sericea** var., 1917, B. P. Bishop Museum, *Occ. Papers* **3** (3): 239, pl. C, fig. 9 (Oahu, on trail to Kaliuwaa, Punaluu).
- anceophila** Cooke, **Carelia**, 1931, B. P. Bishop Museum, *Bull.* **85**: 31, pl. 3, figs. 9, 10 (Kauai, Olokele).
- anceyana** Cooke, **Leptachatina**, 1910, *Manual of Conchology* II, **21**: 39, pl. 1, figs. 18, 19 (Hawaii, Mana, fossil).
- anceyana** Pilsbry and Cooke, **Lyropupa**, 1920, *Manual of Conchology* II, **25**: 235 (based upon Ancey's description of *Lyropupa lyrata* Gould, *Malacological Society of London, Proc.* **6**: 124, 1904).
- anceyana** Cooke and Pilsbry, **Lyropupa**² 1920, *Manual of Conchology* II, **25**: 253, pl. 26, figs. 3, 6 (Hawaii, Olaa).
- anceyana** Cooke and Pilsbry, **Nesopupa**, 1920, *Manual of Conchology* II, **25**: 293, pl. 28, figs. 2, 3 (Hawaii, Olaa).

² *cookei* Clench, *Lyropupa*, new name for *Lyropupa anceyana* Cooke and Pilsbry, 1920, *Manual of Conchology* II, **25**: 253, non *Lyropupa anceyana* Pilsbry and Cooke, *idem.*, p. 235.

- anceyana** Cooke and Pilsbry, *Tornatellaria*, 1916, Manual of Conchology II, 23: 263, pl. 54, fig. 4 (east Maui, Kaupakulua).
- anceyanum** Pilsbry and Cooke, *Elasmias*, 1915, Manual of Conchology II, 23: 118, pl. 31, figs. 7, 8 (west Maui, Maunahooma[ha]).
- andersoni** Cooke and Clench, *Rapanella*, 1943, B. P. Bishop Museum, Occ. Papers 17 (20): 254, text fig. 3 (Tubuai [Austral] Islands, Rapa, Maitua, below Mt. Mangaia).
- Angulidens** Pilsbry and Cooke, 1914, section of *Leptachatina*, Manual of Conchology II, 23: 8. (Sectional type: *Leptachatina subcylindrica* Cooke.)
- angusta** Cooke and Pilsbry, *Nesopupa newcombi* form, 1920, Manual of Conchology II, 25: 315, text fig. 4 (Kauai, Kipu).
- annosa** Cooke, *Amastra rugulosa* var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 230, pl. A, fig. 9 (Kauai, Hanamaulu plains south of Wailua River, Pleistocene).
- antiqua** Cooke and Pilsbry, *Lyropupa*, 1920, Manual of Conchology II, 25: 250, pl. 21, figs. 8, 9, 11 (Oahu, Pleistocene deposits along upper Manoa Road).
- arenarum** Pilsbry and Cooke, *Amastra umbilicata* subsp., 1914, Manual of Conchology II, 23: 23, pl. 2, figs. 1-4 (Molokai, sand dunes of Moomomi, Pleistocene).
- armillata** Cooke, *Amastra ricei* var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 223, pl. A, fig. 8 (Kauai, Milolii).
- artata** Cooke, *Leptachatina*, 1911, Manual of Conchology II, 21: 80, pl. 13, figs. 1-4 (Oahu, Mt. Tantalus, Halawa).
- Atea** Pilsbry and Cooke, 1933, subgenus of *Lamellidea*, Nautilus 47 (2): 62 (subgenotype: *Lamellidea adamsoni* Pilsbry and Cooke).
- attenuata** Cooke, *Leptachatina*, 1911, Manual of Conchology II, 21: 69, pl. 7, figs. 45-46 (Kauai, Hanalei; Ekaula; Waiakoali; Makaweli; Haleieie).
- attenuatus** Cooke and Pilsbry, *Tornatellides*, 1915, Manual of Conchology II, 23: 219, pl. 48, figs. 3, 4 (Oahu, Manoa, fossil).
- aurantium** Pilsbry and Cooke, *Laminella gravis* subsp., 1915, Manual of Conchology II, 23: 54, pl. 1, figs. 3-5 (Oahu, above Waiahole).
- aurora** Pilsbry and Cooke, *Amastra sphaerica* subsp., 1914, Manual of Conchology II, 23: 18, pl. 4, figs. 9-12 (east Maui, Auwahi).
- auwahiensis** Pilsbry and Cooke, *Amastra subsoror* subsp., 1914, Manual of Conchology II, 23: 48, pl. 5, figs. 8-10 (east Maui, Auwahi).
- avus** Pilsbry and Cooke, *Leptachatina oryza* subsp., 1914, Manual of Conchology II, 23: 5, pl. 10, figs. 12-16 (Molokai, Pleistocene sand dunes of Moomomi).
- baldwini** Cooke, *Carelia olivacea* subsp., 1931, B. P. Bishop Museum, Bull. 85: 71, pl. 13, fig. 8 (Kauai).

- baldwini** Cooke, *Leptachatina*, 1910, Manual of Conchology II, 21: 12, pl. 2, figs. 33, 41 (west Maui, Maunahoomaha).
- baldwiniana** Cooke, *Lyropupa rhabdota* subsp., 1920, Manual of Conchology II, 25: 241, pl. 20, figs. 7, 8 (west Maui, Iao).
- baldwiniana** Cooke and Pilsbry, *Tornatellaria*, 1916, Manual of Conchology II, 23: 270, pl. 55, fig. 5 (west Maui, Maunahooma[ha]).
- beata** Pilsbry and Cooke, *Achatinella apexfulva* subsp., 1914, Manual of Conchology II, 22: 329, pl. 60, figs. 17, 17c; pl. 55, fig. 5 (Oahu, crest of Poamoho-Helemano ridge).
- bellus** Cooke and Pilsbry, *Tornatellides*, 1915, Manual of Conchology II, 23: 241, pl. 53, figs. 4, 5 (west Maui, near Lahaina, Maunahooma[ha]).
- bembicodes** Cooke, *Amastra thurstoni* subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 8, pl. 1, fig. 4 (Oahu, road cut at Manoa, fossil).
- berniceia** Pilsbry and Cooke, *Helicina*, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 207, text fig. 11 (Kauai, Limahuli, fossil).
- bishopi** Cooke and Pilsbry, *Nesopupa*, 1920, Manual of Conchology II, 25: 296, pl. 28, fig. 4 (east Maui, Haleakala Crater, near Crystal Cave).
- beta** Pilsbry and Cooke, *Helicina laciniosa* var., 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 202, text fig. 4 (Oahu, Kapalama).
- boettgeri** Cooke and Pilsbry, *Pronesopupa*, 1920, Manual of Conchology II, 26: 8, pl. 1, fig. 17 (Oahu, Tantalus).
- brevis** Cooke, *Leptachatina pachystoma* var., 1910, Manual of Conchology II, 21: 52, pl. 8, fig. 53 (Kauai, Haleieie).
- brunneus** Cooke and Pilsbry, *Tornatellides*, 1915, Manual of Conchology II, 23: 238, pl. 51, figs. 5, 6 (Oahu, Nuuanu near the Pali).
- bryani** Pilsbry and Cooke, *Amastra transversalis* subsp., 1914, Manual of Conchology II, 23: 26, pl. 2, fig. 16 (Oahu, Honolulu, Punchbowl).
- bryani** Cooke and Pilsbry, *Tornatellides*, 1915, Manual of Conchology II, 23: 210, pl. 53, figs. 9, 10 (Laysan Island).
- cacuminis** Pilsbry and Cooke, *Auriculella diaphana* subsp., 1915, Manual of Conchology II, 23: 77, pl. 24, figs. 11, 12 (Oahu, head of Kalihi-Moanalua ridge, Mauna Kope [= Puu Kahuauli]).
- calciphila** Cooke and Clench, *Fijianella*, 1943, B. P. Bishop Museum, Occ. Papers 17 (20): 258, text fig. 7 (Fiji Islands, Lau Islands, Yangasa Levu).
- capax** Pilsbry and Cooke, *Achatinella byronii* subvar., 1913, Manual of Conchology II, 22: 137, pl. 31, fig. 7a, b (Oahu, Waiahole-Waiawa trail, head Waiawa Gulch).
- captiosa** Cooke, *Leptachatina* 1910, Manual of Conchology II, 21: 29, pl. 11, fig. 12 (Oahu, Waianae Mts., back of Leilehua).
- chromatacme** Pilsbry and Cooke, *Achatinella swiftii* subsp., 1914, Manual of Conchology II, 22: 316, pl. 59, figs. 5, 5b (Oahu, Waiawa).

- Cocopupa** Cooke and Pilsbry, 1920, section of *Nesopupa*, Manual of Conchology II, 25: 322. (Sectional type, *Vertigo cocosensis* Dall, monotypic.)
- comes** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 225, pl. 49, figs. 7, 8 (Molokai, western ravine of Kamalo).
- comorensis** Pilsbry and Cooke, **Nesopupa**, 1920, new name, Manual of Conchology II, 25: 353 (new name for *Pupa monas* Morelet 1879, non Westerland 1871).
- concolor** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 31, pl. 6, figs. 9, 10 (Molokai, Kamalo).
- concomitans** 'Hyatt' Pilsbry and Cooke, **Partulina dwightii** var., 1912, Manual of Conchology II, 22: 37, pl. 8, figs. 9-13 (Molokai).
- conspicienda** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 56, pl. 11, fig. 10 (east Maui, Mt. Kukui).
- convexior** Pilsbry and Cooke, **Tornatellaria**, 1916, Manual of Conchology II, 23: 267, pl. 55, fig. 8 (Hawaii, Olaa).
- cornucopia** Cooke and Clench, **Fijianella**, 1943, B. P. Bishop Museum, Occ. Papers 17 (20): 260, fig. 8, *b* (Fiji Islands, Lau Islands, Navutu Iloma).
- corticicola** Cooke and Pilsbry, **Pronesopupa frondicola** subsp., 1920, Manual of Conchology II, 26: 14, pl. 1, fig. 3 (east Maui, Puu Nianiau).
- cramptoni** Pilsbry and Cooke, **Samoana**, 1934, B. P. Bishop Museum, Occ. Papers 10 (14): 8, figs. 4, *a, b*; 5, *f*; 6, *a-c*; 8, *a*; 9, *g* (Tonga Island, Eua).
- cuneata** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 6, pl. 10, figs. 1, 2 (Kauai, Kapaa).
- cylindrella** Cooke, **Leptachatina pachystoma** var., 1910, Manual of Conchology II, 21: 51, pl. 8, fig. 49 (Kauai, Haleieie).
- cyrta** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 268, pl. 23, figs. 9, 10 (Hawaii, Mana, fossil).
- cytherea** Cooke and Crampton, **Partula**, 1930, B. P. Bishop Museum, Occ. Papers 9 (11): 3, pl. 1, fig. A (Society Islands, Tahiti, central portion of Papenoo Valley, Mt. Orohena [Orofena]).
- davisiana** Cooke, **Amastra**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 215, text fig. 1 (Oahu, 1 mile from summit of Konahuanui).
- debilis** Pilsbry and Cooke, **Amastra metamorpha** subsp., 1914, Manual of Conchology II, 23: 20, pl. 5, figs. 6, 7 (west Maui, Olowalu Gulch).
- defuncta** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 39, pl. 1, fig. 16 (Hawaii, Mana, fossil).
- delicta** Cooke, **Amastra (Cyclamastra)**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 7, pl. 1, fig. 2 (Kauai, Nonou Mts.).
- delta** Pilsbry and Cooke, **Helicina laciniosa** var., 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 201, text fig. 2 (Kauai, below Puukapele, Ekaula).

- dextroversa** Pilsbry and Cooke, *Achatinella sowerbyana* subsp., 1914, Manual of Conchology II, 22: 179, pl. 35, figs. 8-13 (Oahu, Pupukea).
- dichroma** Cooke, *Amastra gulickiana* subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 19, pl. 2, fig. 8 (Oahu, near crest of ridge between Punaluu and Kaluanui).
- diptyx** Pilsbry and Cooke, *Tornatellides*, 1915, Manual of Conchology II, 23: 217, pl. 47, figs. 8, 9 (Molokai, western ravine of Kamalo).
- disjuncta** Cooke and Pilsbry, *Nesopupa newcombi* form, 1920, Manual of Conchology II, 25: 308, 317, text fig. 7 (Oahu, Waianae Mts., Mokuleia).
- dispersa** Cooke and Pilsbry, *Nesopupa*, 1920, Manual of Conchology II, 25: 284, pl. 27, figs. 7, 8 (Oahu, Makua).
- dissimilis** Cooke, *Leptachatina coruscans* var., 1910, Manual of Conchology II, 21: 42, pl. 6, fig. 8 (Molokai, near Waikolu).
- dolphin** Cooke and Clench, *Succinea wallisi* subsp., 1945, B. P. Bishop Museum, Occ. Papers 18 (8): 134, fig. 2 (Society Islands, Tahiti, Taia-rapu Peninsula, Tautira Valley, Tii subvalley).
- dormitor** Pilsbry and Cooke, *Leptachatina*, 1914, Manual of Conchology II, 23: 6, pl. 11, fig. 3 (Molokai, near top of Mauna Loa, fossil).
- drepanophora** Cooke and Pilsbry, *Tornatellides*, 1915, Manual of Conchology II, 23: 249, pl. 52, figs. 11-13 (Kauai, Puukapele).
- dubitabilis** Cooke and Pilsbry, *Nesopupa*, 1920, Manual of Conchology II, 25: 291, pl. 28, fig. 9 (Molokai, Poholua, at 2,500 ft.).
- dulcis** Cooke, *Leptachatina*, 1911, Manual of Conchology II, 21: 85, pl. 13, figs. 8, 10 (east Maui, Makawao, Ulupalakua [Ulupalakua]).
- duplocincta** Pilsbry and Cooke, *Achatinella apexfulva* form, 1914, Manual of Conchology II, 22: 323, pl. 55, figs. 6-8 (Oahu, Wahiawa).
- dwrightii** Cooke, *Amastra* (*Heteramastra*), 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 24, pl. 2, fig. 14 (east Maui, Hana).
- Edentulopupa** Cooke and Pilsbry, 1920, section of *Pronesopupa*, Manual of Conchology II, 26: 11. (Sectional type, *Pupa admodesta* Mighels.)
- elephantina** Cooke, *Amastra*, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 8, pl. B, fig. 3 (Oahu, Waimano Gulch).
- emortua** Cooke, *Amastra flavescens* var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 231, pl. A, fig. 6 (Hawaii, northwestern slope of Hualalai, North Kona, Huehue, at 1,700 feet, fossil).
- eos** Pilsbry and Cooke, *Amastra*, 1914, Manual of Conchology II, 23: 26, pl. 2, figs. 14, 15 (Hawaiian Islands, Oahu, Keawaawa).
- errans** Pilsbry and Cooke, *Partulina physa*, 1913, Manual of Conchology II, 22: 111, pl. 17, figs. 14-16 (Hawaii, South Hilo, Puna, Pahoia).
- Eua** Pilsbry and Cooke, 1934, B. P. Bishop Museum, Occ. Papers 10 (14): 4. (Genotype, *Eua globosa* Pilsbry and Cooke.)

- exoptabilis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:21, pl. 10, figs. 5, 6 (Oahu, Diamond Head, fossil).
- fastigata** Cooke, **Amastra rugulosa** var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3):229, pl. B, fig. 1 (Kauai, Koloa, Pleistocene).
- Fijianella** Cooke and Clench, 1943, B. P. Bishop Museum, Occ. Papers 17 (20):257. (Genotype, *Fijianella calciphila* Cooke and Clench.)
- filocostata** Cooke and Pilsbry, **Lyropupa perlonga** subsp., 1920, Manual of Conchology II, 25:262, pl. 23, fig. 12 (Kauai, Limahuli).
- flavida** Cooke, **Auriculella** 1915, Manual of Conchology II, 23:103, pl. 26, figs. 8, 9 (Molokai, Kamalo).
- flemingi** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3):247, pl. B, fig. 7 (east Maui, 2 miles east of Ulupalakua, Kanaio, Pleistocene).
- forbesi** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3):242, pl. B, fig. 8 (Oahu, Waianae Mts., Makua, Pleistocene).
- forbesi** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25:297, pl. 8, fig. 5 (Hawaii, Humuula).
- forbesi** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23:247, pl. 52, figs. 8, 9 (west Maui, Waikapu).
- fossilis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:61, pl. 8, figs. 58, 59 (Kauai).
- fossilis** Cooke and Pilsbry, **Lyropupa lyrata** subsp., 1920, Manual of Conchology II, 25:237, pl. 19, figs. 7, 11 (Oahu, Manoa, Pleistocene).
- fragilis** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23:24, pl. 2, figs. 11, 12 (Molokai, upper Kaunakakai).
- fragosa** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3):236, pl. A, fig. 4 (Hawaii, 3 miles north of Huehue, Kapulehu, Pleistocene).
- fraterna** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21:91, pl. 12, figs. 8, 11 (Kauai).
- frit** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23:226, pl. 49, fig. 6 (Molokai, western ravine of Kamalo).
- frondicola** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26:13, pl. 1, fig. 4 (east Maui, Haleakala, Ainahou, head of Keanae Gap).
- fulgida** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:12, pl. 2, figs. 39, 40 (west Maui, Ahoa, Akau-ka-imu, Mt. Kukui, Mt. Lihau).
- gamma** Pilsbry ad Cooke, **Helicina laciniosa** var., 1908, B. P. Bishop Museum, Occ. Papers 3 (2):202, text fig. 3 (Oahu, Ewa).
- gayi** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21:72, pl. 7, figs. 39, 40 (Kauai, Makaweli).

- gayi** Cooke and Pilsbry, *Tornatellina*, 1915, Manual of Conchology II, 23: 172, pl. 42, fig. 3 (Hawaiian Islands, Kauai, Makaweli).
- gentilis** Cooke, *Amastra conica* var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 233, pl. A, fig. 1 (Hawaii, Waikoloa, Waikii).
- georgii** Pilsbry and Cooke, *Amastra nubilosa* subsp., 1914, Manual of Conchology II, 23: 39, pl. 7, figs. 6-8 (Molokai, sand dunes at Moomomi, Pleistocene).
- globosa** Cooke, *Amastra* (*Cyclamastra*), 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 7, pl. 1, fig. 3 (Oahu, Kahuku, fossil).
- globosa** Pilsbry and Cooke, *Eua*, 1934, B. P. Bishop Museum, Occ. Papers 10 (14): 4, figs. 1-3, *a-c* (Tonga Islands, Eua, Bugai [?]).
- glossema** Cooke, *Carelia*, 1931, B. P. Bishop Museum, Bull. 85: 80, pl. 15, figs. 1-3 (Kauai, Olokele).
- gnampta** Cooke and Pilsbry, *Nesopupa newcombi* subsp., 1920, Manual of Conchology II, 25: 317, text figs. 8, 8a (Oahu, Nuuanu, Luakaha).
- gonioplax** Pilsbry and Cooke, *Nesopupa*, 1920, Manual of Conchology II, 25: 351, pl. 33, figs. 8-10 (Mauritius).
- goniops** Pilsbry and Cooke, *Amastra*, 1914, Manual of Conchology II, 23: 41, pl. 4, figs. 1-5 (west Maui, upper Olowalu gulch).
- gouldi** Pilsbry and Cooke, *Lyropupa lyrata* form, 1920, Manual of Conchology II, 25: 235, pl. 19, figs. 8, 9 (Oahu).
- gouveiae** Cooke and Pilsbry, *Nesopupa wesleyana* form, 1920, Manual of Conchology II, 25: 301, pl. 29, fig. 4 (Hawaii, South Kona, Hookena and Kapua).
- gouveii** Cooke, *Amastra*, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 7, pl. C, fig. 3 (Oahu, Wailupe).
- gregoryi** Cooke, *Amastra cyclostoma* subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 5, pl. 1, fig. 1 (Kauai, 0.5 mile east of Aweoweonui Bay).
- Gulickia** Cooke, 1915, Manual of Conchology II, 23: 112. (Genotype, *Gulickia alexandri* Cooke.)
- gulickiana** Pilsbry and Cooke, *Achatinella lehuiensis* subsp., 1914, Manual of Conchology II, 22: 273, pl. 42, fig. 4 (Oahu, Waianae Mts., Mokuleia).
- haena** Cooke, *Laxisuccinea*, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 277, pl. 25, fig. 5 (Kauai, road cut near western extremity of Haena plain, Pleistocene or Recent).
- hataiana** Pilsbry and Cooke, *Tornatellina*, 1915, Manual of Conchology II, 23: 171, pl. 37, figs. 6, 7 (Japan, Izu, Kita-Iwo-jima).
- haupuensis** Cooke, *Godwinia*, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 267, pl. 24, fig. 3, text fig. 3 (Kauai, northern slope of Mt. Haupu).

- hawaiiensis** Pilsbry and Cooke, **Pupoidopsis**, 1921, Manual of Conchology II, 26: 107, pl. 17, fig. 2 (Oahu, Kailua, Kaelepu).
- hawaiiensis** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 204, text fig. 6 (Oahu).
- hawaiiensis** Pilsbry and Cooke, **Tornatellaria abbreviata** var., 1916, Manual of Conchology II, 23: 269, pl. 55, fig. 14 (Hawaii, Kukuiahae).
- hesperia** Pilsbry and Cooke, **Leptachatina oryza** subsp., 1914, Manual of Conchology II, 23: 5, pl. 10, figs. 10, 11 (Oahu, Kawaihapai).
- hitchcocki** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 243, pl. C, fig. 7 (Molokai, Mauna Loa).
- hyperodon** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23: 12, pl. 11, figs. 6, 7 (east Maui).
- hystricella** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26: 7, pl. 1, fig. 12 (Hawaii, Hilo, Reeds Island).
- idae** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 216, pl. 47, figs. 3, 5, 6 (Oahu, Waianae Mts., Palehua).
- Ilikala** Cooke, 1911, subgenus in *Leptachatina*, Manual of Conchology II, 21: 89. (Subgenotype, *Leptachatina fusca* Newcomb.)
- illibata** Cooke and Pilsbry, **Tornatellaria sykesii** var., 1916, Manual of Conchology II, 23: 266, pl. 55, fig. 7 (Molokai, Kilohana).
- illimis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 10, pl. 10, fig. 3 (Oahu, Waianae Mts., Palehua).
- implicata** Cooke, **Amastra (Heteramastra)**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 25, pl. 2, fig. 15 (east Maui, Kipahulu).
- incerta** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26: 16, pl. 1, fig. 6 (Kauai, Halemanu).
- Indopupa** Cooke and Pilsbry, 1920, section of *Nesopupa*, Manual of Conchology II, 25: 339. (Sectional type, *Pupa filosa* Theobald and Stol.)
- Infranesopupa** Cooke and Pilsbry, 1920, section of *Nesopupa*, Manual of Conchology II, 25: 289. (Sectional type, *Nesopupa limatula* Cooke and Pilsbry.)
- infrequens** Cooke, **Carelia olivacea** subsp., 1931, B. P. Bishop Museum, Bull. 85: 74, pl. 14, fig. 4 (Kauai, Anahola).
- infrequens** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25: 298, pl. 28, fig. 7 (Kauai, Halemanu).
- inopinata** Cooke, **Amastra**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 23, pl. 2, figs. 11, 12 (east Maui, Kula).
- inornatus** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 214, pl. 46, fig. 13 (Molokai, western ravine of Kamalo).
- insignis** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 220, pl. 48, figs. 10-13 (Oahu, 1.5 miles west of Kahuku, fossil).

- Insulipupa** Pilsbry and Cooke, 1920, section of *Nesopupa*, Manual of Conchology II, 25: 342. (Sectional type, *Nesopupa minutalis* Issel.)
- interrupta** Pilsbry and Cooke, **Lyropupa perlonga** subsp., 1920, Manual of Conchology II, 25: 261, pl. 22, fig. 5; pl. 25, figs. 1-4, 10 (Oahu, 1.5 miles west of Kahuku, coral bluff).
- interrupta** Cooke and Pilsbry, **Nesopupa newcombi** subsp., 1920, Manual of Conchology II, 25: 315, text figs. 4a-6a (Hawaii, Waiaha).
- intuscostata** Pilsbry and Cooke, **Tornatellina impressa** var., 1915, Manual of Conchology II, 23: 175, pl. 34, fig. 7 (Society Islands, Huahine).
- iredalei** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 180, pl. 39, figs. 6-8 (Kermadec Islands, Sunday Island).
- irregularis** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 234, pl. 50, figs. 4-6 (west Maui, top of Mt. Kukui).
- irwini** Pilsbry and Cooke, **Achatinella leucorraphe** subsp., 1914, Manual of Conchology II, 22: 302, pl. 59, figs. 9-15a (Oahu, ridges between gulches of Kipapa and Waikakalaua, Kalaikoa and Kaukinehua [Kaukonahua]).
- irwiniana** Cooke, **Amastra**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 213, text fig. 3 (Oahu, summit of Lanihuli).
- isenbergi** Cooke, **Carelia dolei** subsp., 1931, B. P. Bishop Museum, Bull. 85: 53, pl. 6, figs. 6-12 (Kauai, Haena plain, east of Manoa stream).
- janeae** Cooke, **Amastra rugulosa** subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 12, pl. 1, fig. 6 (Kauai, Ohia Valley, Anahola watershed).
- juddii** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 223, pl. B, fig. 5 (Kauai).
- juddii** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 208, text fig. 13 (Kauai, Koloa beach, fossil).
- kaalaensis** Cooke and Pilsbry, **Nesopupa dubitabilis** subsp., 1920, Manual of Conchology II, 25: 292, pl. 28, fig. 13 (Oahu, Waianae Mts., Mokuleia).
- kahakuloensis** Pilsbry and Cooke, **Amastra baldwiniana** subsp., 1914, Manual of Conchology II, 23: 43, pl. 8, figs. 5, 6 (west Maui, Kahakuloa).
- kahoolavensis** Cooke and Pilsbry, **Lyropupa** 1920, Manual of Conchology II, 25: 256, pl. 22, figs. 1-4, 8, 9 (Kahoolawe, Hakioawa Bay).
- kahoolavensis** Cooke and Pilsbry **Tornatellides** 1915, Manual of Conchology II, 23: 211, pl. 46, figs. 3, 4, 7 (Kahoolawe, Hakioawa).
- kahukuensis** Pilsbry and Cooke, **Achatinella valida** subsp., 1914, Manual of Conchology II, 22: 338, pl. 52, figs. 17, 17a (Oahu, Kahuku).
- kahukuensis** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 208, pl. 46, figs. 11, 12 (Oahu, 1.5 miles west of Kahuku).
- kailuanus** Pilsbry and Cooke, **Tornatellides procerulus** subsp., 1915, Manual of Conchology II, 23: 207, pl. 45, fig. 9 (Oahu, Kailua, Kaelepulu).
- kalalauensis** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85: 32, pl. 3, figs. 1-8, 11-17 (Kauai, Kalalau).

- kalamaulensis** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 37, pl. 3, figs. 4-7 (Molokai, Kalamaula).
- kalihienensis** Pilsbry and Cooke, **Laminella gravis** subsp., 1915, Manual of Conchology II, 23: 54, pl. 1, fig. 6 (Oahu, Kalihi).
- kaliuwaensis** Pilsbry and Cooke, **Achatinella decipiens** subsp., 1913, Manual of Conchology II, 22: 150, pl. 32, figs. 1, 1b (Oahu, eastern ravines of Kaliuwa).
- kaluaahacola** Pilsbry and Cooke, **Partulina virgulata** var., 1914, Manual of Conchology II, 22: 359, pl. 26, figs. 3, 3a (Molokai, Kaluaaha).
- kamaloensis** Pilsbry and Cooke, **Laminella depicta** form, 1915, Manual of Conchology II, 23: 56, figured in vol. 21, pl. 52, figs. 6-8 (northwestern Kamalo).
- kamaloensis** Pilsbry and Cooke, **Partulina redfieldii** var., 1914, Manual of Conchology II, 22: 362, pl. 26, figs. 4, 4a (Molokai, branch ravines above Kamalo amphitheater).
- kamaloensis** Pilsbry and Cooke, **Tornatellina polygnampta**, 1915, Manual of Conchology II, 23: 156, pl. 40, figs. 4, 5 (Molokai, western ravines of Kamalo).
- kamaloensis** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 207, pl. 45, figs. 10, 11 (Molokai, northwestern ravine of Kamalo).
- kauaiensis** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 205, text fig. 8 (Kauai, upper part of Milolii).
- kauensis** Pilsbry and Cooke, **Amastra melanosis** subsp., 1915, Manual of Conchology II, 23: 50, pl. 1, fig. 18 (Hawaii, Kau, Waiohinu).
- kaunakakaiensis** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 36, pl. 3, figs. 8-10 (Molokai, upper Kaunakakai).
- kawaihapaiensis** Pilsbry and Cooke, **Amastra antiqua** subsp., 1914, Manual of Conchology II, 23: 22, pl. 2, fig. 13 (Oahu, Kawaihapai).
- kermadecensis** Pilsbry and Cooke, **Tornatellides subperforatus** subsp., 1915, Manual of Conchology II, 23: 200, pl. 44, fig. 16 (Kermadec Islands, Sunday Island).
- kermadecensis** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 149, pl. 39, figs. 1-5 (Kermadec Islands, Sunday Island).
- kilauea** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 208, pl. 45, figs. 12, 13 (Hawaii, crest of Kilauea Crater).
- kilohanana** Pilsbry and Cooke, **Tornatellina cylindrica** var., 1915, Manual of Conchology II, 23: 154, pl. 40, figs. 3, 6 (Molokai, Kilohana).
- knudseni** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85: 82, pl. 15, fig. 4 (Kauai).
- knudseni** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 204, text fig. 7 (Kauai, Olokele).

- knudseni** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 8, pl. 9, figs. 11, 12 (Kauai, near Halemanu, Waipo [Waipoo]).
- kona** Pilsbry and Cooke, **Lyropupa ovatula** subsp., 1920, Manual of Conchology II, 25: 266, pl. 26, figs. 5, 10, 11, 14 (Hawaii, North Kona at Huehue, fossil).
- konaensis** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 212, pl. 46, figs. 5, 6 (Hawaii, Olaa, Puna, Kona).
- konana** Pilsbry and Cooke, **Partulina physa** subsp., 1914, Manual of Conchology II, 22: 365, pl. 54, figs. 5, 5a (Hawaiian Islands, Hawaii, Honoula [Honuaula], North Kona).
- koolauensis** Cooke, **Planamastra spaldingi** subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 4, pl. 2, fig. 34 (Oahu, Kahuku, Pleistocene or later).
- kuhnsi** Cooke, **Amastra (Laminella)**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 217, one text fig. (west Maui, Kahakuloa).
- kuhnsi** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 48, pl. 11, fig. 3 (west Maui, Maunahoomaha; Abau-ka-imu [Akau-ka-imu]).
- laddi** Cooke and Clench, **Fijianella**, 1943, B. P. Bishop Museum, Occ. Papers 17 (20): 259, text fig. 8, a (Fiji Islands, Lau Islands, Navutu Iloma).
- laevigata** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 11, pl. 6, figs. 4, 5 (Molokai, Mapulehu Ridge).
- lahainana** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 43, pl. 6, figs. 1-10 (west Maui, Lahaina, Olowalu Gulch).
- laiensis** Pilsbry and Cooke, **Achatinella sowerbyana** subsp., 1914, Manual of Conchology II, 22: 178, pl. 34, figs. 15, 15a (Oahu, Laie).
- lanaiensis** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23: 107, pl. 19, figs. 12-16 (Lanai).
- lanaiensis** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21: 67, pl. 12, figs. 2, 3 (Lanai).
- lanaiensis** Cooke, **Lyropupa rhabdota** subsp., 1920, Manual of Conchology II, 25: 241, pl. 20, fig. 6 (Lanai).
- lanceolata** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21: 65, pl. 6, figs. 12, 13 (Molokai, Kamalo and Waikolu).
- lanceolata** Cooke and Crampton, **Partula**, 1930, B. P. Bishop Museum, Occ. Papers 9 (11): 5, pl. 1, fig. B (Fiji Islands, Mango Island).
- lanceolata** Cooke and Pilsbry, **Tornatellina**, 1915, Manual of Conchology II, 23: 158, pl. 43, figs. 4-6 (Oahu, Nuuanu, Tantalus).
- Laxisuccinea** Cooke, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 276. (Genotype, *Laxisuccinea libera* Cooke.)
- leiahimensis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 22, pl. 10, figs. 9, 10 (Oahu, Diamond Head, fossil).

- lenta** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21:79, pl. 2, figs. 23, 24 (west Maui, Wahakuli [Wahikuli], Maunahoomaha).
- lepida** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:40, pl. 1, figs. 12, 13 (Hawaii, Mana).
- leptospira** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23:243, pl. 51, figs. 11-13 (Oahu, near the Pali, Nuuanu).
- libera** Cooke, **Laxisuccinea**, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 276, pl. 25, fig. 6 (Kauai, southern extremity of Hanamaulu flat, road cut, Pleistocene or Recent).
- lilae** Cooke and Pilsbry, **Tornatellaria**, 1915, Manual of Conchology II, 23:256, pl. 54, figs. 1, 2 (Waianae Mts., ridge west of Kolekole Pass).
- limatula** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25:290, pl. 28, figs. 6, 10 (east Maui, Haleakala Crater, Ainahou and Palikou [Paliku]).
- Limbatiopupa** Cooke and Pilsbry, 1920, section of *Nesopupa*, Manual of Conchology II, 25:306. (Sectional type, *Nesopupa newcombi* Pfeiffer.)
- lirata** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85:78, pl. 14, figs. 9-12 (Kauai, Mahaulepu, 0.5 mile east of Aweoweonui Bay).
- litoralis** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25:283, pl. 28, fig. 1 (Oahu, Ewa).
- longior** Pilsbry and Cooke, **Partulina terebra** var., 1912, Manual of Conchology II, 22:63, pl. 15, fig. 12 (west Maui, Wailuku and Waiehu).
- longiuscula** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:57, pl. 11, fig. 11 (Lanai).
- luakahaense** Pilsbry and Cooke, **Elasmias**, 1915, Manual of Conchology II, 23:117, pl. 29, figs. 7-10 (Oahu, Luakaha, Nuuanu).
- lymani** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85:74, pl. 14, fig. 5 (Kauai).
- lymaniana** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 208, text fig. 12 (Oahu, Waialua).
- lymaniana** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26:18, pl. 1, fig. 2 (Hawaii, Olaa Road, 28.5 miles).
- Lyropupilla** Cooke and Pilsbry, 1920, section in *Lyropupa*, Manual of Conchology II, 25:247. (Sectional type, *Lyropupa spaldingi* Cooke and Pilsbry.)
- manana** Pilsbry and Cooke, **Leptachatina opipara** subsp., 1914, Manual of Conchology II, 23:7 (Oahu, intersection of the Waimano-Manana ridge and main range).
- margaretae** Pilsbry and Cooke, **Achatinella casta** subsp., 1914, Manual of Conchology II, 22:240, pl. 42, figs. 9, 10 (Oahu, head of Waiau Valley, Kolokukahau peak).

- maunaloae** Pilsbry and Cooke, **Lyropupa micra** subsp., 1920, Manual of Conchology II, 25: 264, pl. 25, figs. 8-9 (Molokai, Mauna Loa).
- mbengensis** Cooke, **Placostylus (Euplacostylus) seemanni** subsp., 1942, B. P. Bishop Museum, Occ. Papers 17 (9): 92, fig. 2, *a, b* (Fiji Islands, Mbenga Island, near Naceva).
- mcgregori** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23: 8, pl. 11, fig. 8 (west Maui, near Lahaina).
- mcgregori** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 144, pl. 35, figs. 14, 15 (Hawaii, Hilo).
- meinickei** [meineckei] Pilsbry and Cooke, **Achatinella lehuiensis** subsp., 1921, Nautilus 34: 109, pl. 4, figs. 6-9 (Oahu, Waianae Mts., Haleauau Valley).
- meineckei** Cooke, **Amastra anthonii** subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 14, pl. 1, figs. 7, 11-15 (Kauai, Kalalau).
- meineckei** Cooke, **Carelia cumingiana** subsp., 1931, B. P. Bishop Museum, Bull. 85: 46, pl. 5, figs. 9-13 (Kauai, ridge between Lumahai and Wai-niha).
- melanogama** Pilsbry and Cooke, **Achatinella lorata** form, 1914, Manual of Conchology II, 22: 283, pl. 51, figs. 1-3; pl. 52, figs. 8, 8a (Oahu, Mauna-wili).
- metamorpha** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 19, pl. 5, figs. 1-5 (west Maui, Olowalu Gulch).
- micra** Cooke, **Leptachatina brevicula** var., 1910, Manual of Conchology II, 21: 24, pl. 8, fig. 55 (Kauai, Haleieie and Milolii).
- micra** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 263, pl. 23, fig. 7; pl. 25, figs. 5-7 (Oahu, Kailua, Kaelepulu).
- micra** Pilsbry and Cooke, **Nesopupa**, new name, 1920, Manual of Conchology II, 25: 351 [new name for *Pupa (Pupilla) exigua* H. Adams 1868, non Say 1822].
- microdon** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23: 10, pl. 9, fig. 3 (Oahu, Waianae Mts., western ridge of Popouwela).
- micromphala** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 229, pl. 49, figs. 12, 13 (Molokai, western ravine of Kamalo).
- minuta** Cooke and Pilsbry, **Auriculella**, 1915, Manual of Conchology II, 23: 90, pl. 25, figs. 5-9 (Oahu, Nuuanu and Palolo).
- mirabilis** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 245, pl. B, fig. 9 (east Maui, below Kaupo Gap).
- mirabilis** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85: 29, pl. 1, figs. 9-11 (Kauai, 0.5 mile east of Aweoweonui).
- Mirapupa** Cooke and Pilsbry, 1920, section of *Lyropupa*, Manual of Conchology II, 25: 255. (Sectional type, *Lyropupa perlouga* Pease.)

- mistura** Pilsbry and Cooke, *Achatinella bulimoides* subsp., 1913, Manual of Conchology II, 22: 156, pl. 33, figs. 5, 5c, 6, 7 (Oahu, Kaliuwaa Valley).
- modicella** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 9, pl. A, fig. 7 (Hawaii, Waikoloa, Waikii).
- molokaiensis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 22, pl. 10, figs. 11, 12 (Molokai, Wailau Pali, Kaluaaha, Mapulehu Ridge).
- molokaiensis** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26: 15, pl. 1, fig. 5 (Molokai, Kawela).
- montana** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23: 82, pl. 27, fig. 9 (Oahu, Mt. Konahuanui).
- montana** Cooke and Crampton, **Partula**, 1930, B. P. Bishop Museum, Occ. Papers 9 (11): 7, pl. 1, fig. D (Samoan Islands, Upolu Island, Afiamalu region, near Tiapapala Pass, 7.75 miles south of Apia).
- montivaga** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 240, pl. C, fig. 5 (Oahu, Kalihi ridge, top of Mauna Kope).
- moomomiensis** Pilsbry and Cooke, **Amastra humilis** subsp., 1914, Manual of Conchology II, 23: 38, pl. 7, figs. 9-14 (Molokai, sand dunes of Moomomi, Pleistocene).
- moomomiensis** Pilsbry and Cooke, **Lyropupa ovatula** subsp., 1926, Manual of Conchology II, 27: 225, pl. 28, figs. 3-5 (Molokai, Moomomi, fossil).
- moomomiensis** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 223, pl. 48, figs. 14, 15 (Molokai, Moomomi, fossil).
- morbida** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21: 87, pl. 13, fig. 12 (Molokai, Puu Kolekole).
- multidentata** Cooke and Pilsbry, **Nesopupa newcombi** form, 1920, Manual of Conchology II, 25: 315, text figs. 3, 3a (Oahu, Nuuanu, Glen Ada).
- mumfordi** Pilsbry and Cooke, **Lamellidea**, 1933, Nautilus 47: 62 (Marquesas Islands, Hivaoa, Ponaohumu).
- nakadai** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 170, pl. 37, figs. 8-10 (Bonin Islands, Chichi-jima).
- nannodes** Cooke, **Amastra (Heteramastra)**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 26, pl. 2, fig. 16 (east Maui, Kula).
- nannodes** 'Moellendorff' Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25: 341, pl. 32, fig. 13 (Philippine Islands, Bohol).
- nanus** Cooke and Pilsbry, **Tornatellides forbesi** subsp., 1915, Manual of Conchology II, 23: 248, pl. 52, figs. 5, 10 (Hawaii, Hilo, Reeds Island).
- necra** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85: 85, pl. 16, figs. 1-3 (Kauai, Hanamalu [Hanamaulu] Flats, 1 mile south of Wailua Stream).
- neglecta** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 45, pl. 7, fig. 20 (Maui?).

- nematoglypta** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23: 14, pl. 9, figs. 9, 10 (Oahu, Halawa).
- Nesanassa** Pilsbry and Cooke, 1934, subgenus of *Eua*, B. P. Bishop Museum, Occ. Papers 10 (14): 18. (Genotype, *Partula zebrina* Gould.)
- Nesodagys** Cooke and Pilsbry, 1920, section of *Nesopupa*, Manual of Conchology II, 25: 299. (Sectional type; no species was designated, so it is here selected to be *Nesopupa wesleyana* Ancey, the first of the two included species to be the type.)
- Nesopupilla** Pilsbry and Cooke, 1920, section of *Nesopupa*, Manual of Conchology II, 25: 278. (Sectional type, *Nesopupa waianaensis* Cooke and Pilsbry.)
- Nesovitrea** Cooke, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 271. (Genotype, *Vitrea pauxillus* Gould.)
- nigricans** Pilsbry and Cooke, **Achatinella byronii** subsp., 1913, Manual of Conchology II, 22: 138, pl. 31, figs. 10-12 (Oahu, Waimano-Manana ridge).
- nubigena** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 48, pl. 5, figs. 11, 12; pl. 3, fig. 15 (west Maui, Lahaina, gulch to the right of Maunahoomaha).
- nuuanuensis** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 206, text fig. 10 (Oahu, upper part of Nuuanu).
- oahuensis** Pilsbry and Cooke, **Helicina**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 199, text fig. 1 (Oahu, Waianae Mountains, Leilehua Ranch house).
- oahuensis** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25: 317, pl. 29, figs. 11, 12 (Oahu, Nuuanu Valley, Luakaha Falls).
- oahuensis** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 222, pl. 48, figs. 8, 9 (Oahu, Kahuku).
- occidentalis** Cooke, **Leptachatina nitida** var., 1910, Manual of Conchology II, 21: 43, pl. 2, fig. 22 (west Maui, Maunahoomaha).
- occidentalis** Pilsbry and Cooke, **Partulina dwightii** var., 1914, Manual of Conchology II, 23: 361, pl. 26, fig. 6. (Molokai, sand dunes of Moomomi, Pleistocene).
- ogasawarana** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 151, pl. 32, figs. 1-4, 11, 12 (Bonin Islands, Minami-jima).
- olaaensis** Cooke and Pilsbry, **Columella**, 1926, Manual of Conchology II, 27: 248, pl. 30, fig. 7 (Hawaii, Olaa).
- olaaensis** Cooke, **Leptachatina konaensis** var., 1910, Manual of Conchology II, 21: 45, pl. 1, fig. 4 (Hawaii, Olaa).
- olivacea** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23: 81, pl. 27, figs. 10, 11 (Oahu, Mt. Olympus and Konahuanui).

- oncospira** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 214, pl. 46, fig. 8 (Hawaii, Kaiwiki).
- opipara** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 30, pl. 12, fig. 1 (Oahu, apex of mountain range back of Palolo Valley).
- optabilis** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21: 84, pl. 13, fig. 9 (Oahu, Waianae Mountains, back of Leilehua).
- orites** Cooke and Clench, **Electrina succinea** subsp., 1943, B. P. Bishop Museum, Occ. Papers 17 (20): 252, fig. 2 (Tubuai Islands, Rapa, eastern ridge of Mt. Perahu).
- orycta** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26: 18, pl. 1, fig. 10 (Hawaiian Islands, Hawaii, Palihoukapapa [= Palihoukapapa], fossil).
- oswaldi** Cooke, **Amastra (Metamastra)**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 22, pl. 2, fig. 13 (Oahu, crest of Kualoa ridge, east of Puu Kanehoalani).
- ovata** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 33, pl. 2, fig. 30 (west Maui, Maunahoomaha).
- ovatula** Cooke, **Amastra (Amastrella)**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 17, pl. 2, figs. 5-7 (Kauai, western edge of Haena plain, Pleistocene).
- ovatula** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 265, pl. 24, figs. 1-5 (Oahu, Kailua, Kaelepulu).
- pagodula** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 237, pl. B, fig. 4 (Hawaii, Huehue, Pleistocene).
- paropsis** Cooke, **Catinella**, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 275, pl. 25, fig. 3 (Oahu, Kaipapau, near summit of Koolau Range).
- Pauahia** Cooke, 1911, subgenus of *Leptachatina*, Manual of Conchology II, 21: 80. (Subgenotype, *L. artata* Cooke.)
- paulula** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 240, pl. B, fig. 6 (Oahu, Malaikahana, Pleistocene).
- percostata** Pilsbry and Cooke, **Lyropupa micra** subsp., 1920, Manual of Conchology II, 25: 264, pl. 25, figs. 11, 12 (Oahu, Kailua, Kaelepulu).
- perfecta** Pilsbry and Cooke, **Partulina gouldi** var., 1912, Manual of Conchology II, 22: 54, pl. 11, figs. 18-21 (west Maui, Wailuku).
- perforata** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21: 89, pl. 7, fig. 32 (Kauai, Puukapele; Waipo [Waipoo]; Kumuwela).
- periscelis** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85: 83, pl. 15, figs. 5, 6 (Kauai, Hanalei Valley, Kaapoko branch).
- perplexa** Pilsbry and Cooke, **Achatinella turgida** subsp., 1914, Manual of Conchology II, 22: 296, pl. 56, figs. 5, 5f (Oahu, lateral spurs and northern ridge of Waimano Valley).

- persubtilis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:15, pl. 10, fig. 4 (Oahu, Waianae Mountains, back of Waialua).
- perversa** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23:90, pl. 25, figs. 3, 4 (Oahu, Nuuanu and Kuliuou).
- pilsbryi** Cooke, **Amastra**, 1913, Nautilus 27:68; 1914, Manual of Conchology II, 23:46, pl. 4, figs. 6-8 (west Maui, Mt. Helu).
- pilsbryi** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:55, pl. 11, figs. 5, 6 (Oahu, Kukaeiole in Kaaawa).
- pilsbryi** Cooke, **Tornatellides**, 1914, Nautilus 28:79 (Oahu, Waianae Mts., Popouwela).
- plagiptyx** Pilsbry and Cooke, **Lyropupa**, 1920, Manual of Conchology II, 25:267, pl. 24, figs. 8, 11, 12 (Oahu, Kawaihapai).
- plagiptyx** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23:242, pl. 53, figs. 1-3 (Molokai, western ravine of Kamalo).
- pluris** Pilsbry and Cooke, **Lyropupa rhabdota** subsp., 1920, Manual of Conchology II, 25:240, pl. 20, figs. 3-5 (Molokai, Kaunakakai).
- pluscula** Cooke, **Amastra umbilicata** var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3):228, pl. C, fig. 2 (Hawaii, North Kona, Kapulehu).
- polygnampta** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23:155, pl. 41, figs. 1-5, 7, 8 (Maui, Makawao and Kaupakalua [Kaupakulua]).
- ponapensis** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23:172 (new name for *Tornatellina pusilla* Möllendorff, non *T. pusilla* Gould) (Caroline Islands, Ponape).
- popouelensis** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23:235, pl. 50, figs. 9-12 (Oahu, Waianae Mountains, western ridge of Popouwela).
- popouwelensis** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23:1, pl. 9, fig. 4 (Oahu, western ridge of Popouwela).
- praeopima** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3):241, pl. C, fig. 8 (Oahu, Waiahole, crest of Koolau).
- praestabilis** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21:43, pl. 2, figs. 37, 38 (west Maui, Lahaina).
- priggei** Cooke, **Carelia olivacea** subsp., 1913, B. P. Bishop Museum, Bull. 85:73, pl. 14, figs. 1-3 (Kauai, southern side of Anahola ridge).
- prionoptychia** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23:246, pl. 52, figs. 3, 4 (Nuuanu near the Pali).
- problematica** Cooke, **Amastra (Cyclamastra)**, 1913, B. P. Bishop Museum, Occ. Papers 10 (6):9, pl. 1, fig. 5 (Oahu, Kawaihoa).
- propinquella** Cooke, **Carelia olivacea** subsp., 1931, B. P. Bishop Museum, Bull. 85:72, pl. 13, figs. 9-13 (Kauai, Wailua).

- pulchra** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 29, pl. 10, figs. 7, 8 (Oahu, Waianae Mountains, back of Leilehua).
- pupoidea** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21: 74, pl. 7, figs. 43, 44 (Kauai, Milolii).
- Pupoidopsis** Pilsbry and Cooke, 1921, Manual of Conchology II, 26: 106. (Genotype, *Pupoidopsis hawaiiensis* Pilsbry and Cooke.)
- pupukanioe** Pilsbry and Cooke, **Achatinella**, 1913, Manual of Conchology II, 22: 174, pl. 35, figs. 14-17 (Oahu, Manana ridge, crest of the Waimano-Manana ridge).
- puukolekolensis** Pilsbry and Cooke, **Lyropupa kahoolavensis** subsp., 1920, Manual of Conchology II, 25: 258, pl. 26, figs. 9, 12 (Molokai, Puukolekole).
- puukolekolensis** Pilsbry and Cooke, **Tornatellides procerulus** subsp., 1915, Manual of Conchology II, 23: 207, pl. 45, figs. 7, 8 (Molokai, ravine east of Puukolekole).
- raoulensis** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 180, pl. 39, figs. 9-11 (Kermadec Islands, Sunday Island).
- Rapanella** Cooke and Clench, 1943, B. P. Bishop Museum, Occ. Papers 17 (20): 253. (Genotype, *Rapanella andersoni* Cooke and Clench.)
- ratusukuni** Cooke, **Ouagapia**, 1942, B. P. Bishop Museum, Occ. Papers 17 (9): 91, fig. 1 (Fiji Islands, Viti Levu, Nandarivatu).
- remota** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 228, pl. A, fig. 3 (Kauai, Kalalau Valley, southwestern bluff, Pleistocene).
- rhabdota** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 239, pl. 20, fig. 2 (Molokai, Pelekunu).
- rhadina** Cooke and Pilsbry, **Nesopupa wesleyana** subsp., 1920, Manual of Conchology II, 25: 301, pl. 29, fig. 13 (Molokai, Poholua).
- rhodesiana** Pilsbry and Cooke, **Nesopupa bisulcata** subsp., 1920, Manual of Conchology II, 25: 360, pl. 34, figs. 5, 6 (Rhodesia, Victoria Falls).
- ricei** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 221, pl. C, fig. 1 (Kauai, Kauaiula [Kawaiula] branch of Milolii Valley).
- ronaldi** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 234, pl. 50, figs. 7, 8 (Oahu, Waianae Mountains, Palehua).
- roseoplica** Pilsbry and Cooke, **Achatinella sowerbyana** subsp., 1914, Manual of Conchology II, 22: 180, pl. 34, fig. 12 (Oahu, Opaehula).
- sagittata** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23: 2, pl. 11, fig. 9 (Molokai, upper Kaunakakai).
- scabra** Pilsbry and Cooke, **Lyropupa**, 1920, Manual of Conchology II, 25: 254, pl. 26, figs. 1, 2 (east Maui, Ukulele).
- sepulta** Pilsbry and Cooke, **Amastra humilis** subsp., 1914, Manual of Conchology II, 23: 39, pl. 7, figs. 15-17 (Molokai, sand dunes of Moomomi, Pleistocene).

- sericata** Cooke and Pilsbry, **Pronesopupa**, 1920, Manual of Conchology II, 26: 17, pl. 1, fig. 1 (Hawaii, Piihonua).
- Sericipupa** Cooke and Pilsbry, 1920, section of *Pronesopupa*, Manual of Conchology II, 26: 13. (Sectional type, *Pronesopupa frondicola* Cooke and Pilsbry.)
- serrarius** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 247, pl. 52, figs. 6, 7 (Oahu, Glen Ada).
- serrula** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23: 93, pl. 25, figs. 13, 14 (Oahu, Mt. Konahuanui and Kuliouou).
- sharpi** Pilsbry and Cooke, **Sphyradium**, 1906, Academy of Natural Sciences Philadelphia, Proc. 58: 215, text figs. 1, 2 (Hawaii, crest of Kilauea Crater).
- sharpi** Pilsbry and Cooke, **Tornatellaria**, 1916, Manual of Conchology II, 23: 270, pl. 55, fig. 10 (Hawaii, crest of Kilawea [Kilauea] Crater).
- simulacrum** Pilsbry and Cooke, **Achatinella turgida** subsp., 1914, Manual of Conchology II, 22: 299, pl. 56, figs. 13, 14d (Oahu, Waimano-Manana ridge, along the summit trail).
- singularis** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25: 320, pl. 29, fig. 8 (Oahu, Kaliuwaa).
- sinulifera** Pilsbry and Cooke, **Lyropupa sparna**, 1920, Manual of Conchology II, 25: 253, pl. 22, fig. 13 (Molokai, western ravine of Kamalo).
- smithi** Cooke and Pilsbry, **Tornatellaria**, 1916, Manual of Conchology II, 23: 269, pl. 55, fig. 11 (Hawaii: Olaa, Kaiwiki, and Hilo).
- societatis** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 147, pl. 36, fig. 1; pl. 35, figs. 8, 11 (Society Islands, Raiatea).
- somniator** Pilsbry and Cooke, **Leptachatina**, 1914, Manual of Conchology II, 23: 7, pl. 11, figs. 4, 5 (Molokai, near top of Mauna Loa).
- spaldingi** Pilsbry and Cooke, **Achatinella**, 1914, Manual of Conchology II, 22: 271, pl. 42, figs. 1-3 (Oahu, Waianae Mts., Pukuloa).
- spaldingi** Cooke, **Amastra**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 214, text fig. 2 (Oahu, summit of Konahuanui).
- spaldingi** Cooke, **Carelia necra** subsp., 1913, B. P. Bishop Museum, Bull. 85: 88, pl. 16, figs. 4-7 (Kauai, northern half of Waipouli race track).
- spaldingi** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 248, pl. 21, figs. 10, 12, 13 (Oahu, Waianae Mts., Puu Kaua).
- spaldingi** Cooke, **Planamastra**, 1933, B. P. Bishop Museum, Occ. Papers 10 (6): 3, pl. 2, figs. 1, 2 (Oahu, Waianae Mts., Pukaloa).
- spaldingi** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 230, pl. 53, figs. 6-8 (Oahu, Kaaawa).
- sparna** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 252, pl. 22, figs. 6, 7, 10, 11 (Molokai, Kalihi).

- spicula** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3) : 234, pl. A, fig. 2 (Hawaii, Waikaloa, Waikii).
- spinigera** Cooke and Pilsbry, **Pronesopupa boettgeri** subsp., 1920, Manual of Conchology II, 26 : 10, pl. 1, fig. 11 (Oahu, Nuuanu, Luakaha).
- stokesi** Pilsbry and Cooke, **Tornatellaria**, 1916, Manual of Conchology II, 23 : 259, pl. 54, fig. 8 (Oahu, Nuuanu, Glen Ada).
- straminea** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23 : 77, pl. 24, fig. 13 (Oahu, Mt. Tantalus).
- Sturanyella** Pilsbry and Cooke, 1934, Nautilus 48 : 54. (Genotype, *Helicina plicatilis* Mousson.)
- subcentralis** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25 : 294, pl. 28, fig. 8 (Hawaii, Palihooukapapa).
- subcostata** Pilsbry and Cooke, **Nesopupa baldwini** subsp., 1920, Manual of Conchology II, 25 : 288, pl. 27, figs. 11, 12 (Molokai, upper Kaunakakai).
- subglobosa** Cooke, **Amastra anthonii** subsp., 1933, B. P. Bishop Museum, Occ. Papers 10 (6) : 16, pl. 1, fig. 16 (Kauai, Waimea).
- subovata** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21 : 37, pl. 11, fig. 2 (Lanai).
- subrugosa** Pilsbry and Cooke, **Tornatellina baldwini** var., 1915, Manual of Conchology II, 23 : 143, pl. 35, figs. 7, 10 (Maui).
- sykesii** Cooke and Pilsbry, **Tornatellaria**, 1916, Manual of Conchology II, 23 : 265, pl. 55, fig. 6 (Hawaii, Hilo and Olaa).
- tantalus** Pilsbry and Cooke, **Auriculella**, 1915, Manual of Conchology II, 23 : 97, pl. 24, figs. 15, 16 (Oahu, Pauoa side of Tantalus along the Castle trail).
- tantalus** Pilsbry and Cooke, **Tornatella**, 1915, Manual of Conchology II, 23 : 172, pl. 40, figs. 8-10 (Oahu, southwestern rim of Tantalus).
- tantilla** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21 : 81, pl. 13, figs. 5-7 (Oahu, Waianae Mts., back of Leilehua).
- tenebrosa** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85 : 75, pl. 14, figs. 6-8 (Kauai, Kipu range, Haupu).
- thaamuni** [thaanumi] Pilsbry and Cooke **Achatinella**, 1914, Manual of Conchology II, 22 : 273, pl. 42, figs. 5, 6 (Oahu, Waianae Mts., Mt. Kaala, Haleauau).
- thaanumi** Cooke, **Carelia**, 1931, B. P. Bishop Museum, Bull. 85 : 92, pl. 16, fig. 8 (Kauai, south side of Wailua River near base of Kalepa range).
- thaanumi** Cooke, **Leptachatina**, 1911, Manual of Conchology II, 21 : 88, pl. 6, figs. 16, 17 (Molokai, Mapulehu ridge).
- thaanumi** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25 : 242, pl. 20, figs. 12, 13 (east Maui, Auwahi).
- thaanumi** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23 : 215, pl. 47, figs. 1, 2, 4 (Molokai, Mapulehu).

- thaumasia** Cooke and Pilsbry, **Lyropupa**, 1920, Manual of Conchology II, 25: 270, pl. 24, figs. 13-15; pl. 25, fig. 14 (Kauai, Hanakapiai).
- thurstoni** Pilsbry and Cooke, **Achatinella sowerbyana** subsp., 1914, Manual of Conchology II, 22: 177, pl. 34, figs. 13, 14b (Oahu, Kahuku).
- thurstoni** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 224, pl. B, fig. 2 (Oahu, Manoa, Pleistocene).
- thurstoni** Cooke and Crampton, **Partula**, 1930, B. P. Bishop Museum, Occ. Papers 9 (11): 6, pl. 1, fig. C (Samoa, Ofu Island).
- thwingi** Pilsbry and Cooke, **Partulina**, 1914, Manual of Conchology II, 22: 357, pl. 54, figs. 6, 6b (east Maui, Auwahi).
- truncata** Cooke, **Lyropupa**, 1908, B. P. Bishop Museum, Occ. Papers 3 (2): 211, text fig. (Hawaii, Kohala Mts.).
- tryoni** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 197, pl. 44, figs. 2, 3 (Bonin Islands, Haha-jima).
- tryphera** Cooke and Pilsbry, **Nesopupa wesleyana** form, 1920, Manual of Conchology II, 25: 301, pl. 29, fig. 3 (Oahu, Palolo).
- tuberculata** Cooke, **Catinella**, 1921, B. P. Bishop Museum, Occ. Papers 7 (12): 275, pl. 25, fig. 2 (Oahu, Mt. Kaala).
- turritella** Cooke, **Auriculella**, 1915, Manual of Conchology II, 23: 92, pl. 25, fig. 15 (Oahu, Konahuanui).
- uahukana** Pilsbry and Cooke, **Lamellidea**, 1933, Nautilus 47: 62 (Marquesas Islands, Uahuka, Hane).
- ualapuensis** Pilsbry and Cooke, **Newcombia cumingi** subsp., 1912, Manual of Conchology II, 22: 12, pl. 2, figs. 11, 12 (Molokai, Ualapue).
- ultima** Pilsbry and Cooke, **Amastra**, 1914, Manual of Conchology II, 23: 25, pl. 2, figs. 9, 10 (Hawaii, Kahuku, Kau).
- uncifera** Cooke and Pilsbry, **Lyropupa lyrata** subsp., 1920, Manual of Conchology II, 25: 236, pl. 19, figs. 12, 13 (Oahu, coral bluff, 1.5 mile west of Kahuku).
- vancouverinsulae** Pilsbry and Cooke, **Polygyra germana** subsp., 1922, Nautilus 36: 38 (Vancouver Island; Cameron Lake).
- varia** Cooke, **Leptachatina**, 1910, Manual of Conchology II, 21: 32, pl. 11, fig. 1 (Molokai, Pali-ko-i in Halawa and fossil at mouth of Halawa Valley).
- verrieri** Cooke, **Placostylus (Callistocharis) gracilis** subsp., 1942, B. P. Bishop Museum, Occ. Papers 17 (9): 93, fig. 2, c (Fiji Islands, Mbenga Island, near Dakuibequa Village).
- vespertina** Pilsbry and Cooke, **Amastra reticulata** subsp., 1914, Manual of Conchology II, 23: 30, pl. 2, fig. 17 (Oahu, Kawaihapai).
- vetuscula** Cooke, **Amastra uniplicata** var., 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 244, pl. A, fig. 5 (Molokai, shifting sands north of Mauna Loa and south of Laina, Pleistocene).

- virgula** Cooke and Pilsbry, **Tornatellides**, 1915, Manual of Conchology II, 23: 241, pl. 51, figs. 10, 14 (east Maui, Kaupakalua [Kaupakulua]).
- viriosa** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 235, pl. C, fig. 6 (Hawaii, Kahauloa and Kealakekua).
- voyana** Pilsbry and Cooke, **Tornatellina**, 1915, Manual of Conchology II, 23: 179, pl. 35, figs. 12, 13 (Hervey Islands, Maui).
- waianaensis** Pilsbry and Cooke, **Laminella gravis** subsp., 1915, Manual of Conchology II, 23: 54, pl. 1, figs. 7, 8 (Oahu, Waianae Mts., Haleauau).
- waianaensis** Cooke and Pilsbry, **Nesopupa**, 1920, Manual of Conchology II, 25: 281, pl. 27, figs. 4-6 (Oahu, Waianae Mts., Pukaloa).
- waianaensis** Pilsbry and Cooke, **Tornatellides**, 1915, Manual of Conchology II, 23: 237, pl. 51, figs. 3, 4 (Oahu, Waianae Mts., western ridge of Popouwela).
- waimanoensis** Pilsbry and Cooke, **Achatinella byronii** subvar., 1913, Manual of Conchology II, 22: 137, pl. 31, figs. 9, 9d (Oahu, crest of Waimano-Manana ridge).
- Waimea** Cooke and Pilsbry, 1914, subgenus in *Tornatellides*, Manual of Conchology II, 23: 250. (Subgenotype, *Tornatellina rudicostata* Ancey, monotypic.)
- walapuensis** Pilsbry and Cooke, **Nucombina cumingi** subsp., 1912, Manual of Conchology II, 22: 12, pl. 2, figs. 11-12 (Molokai, Ualapue).
- wallisi** Cooke and Clench, **Succinea**, 1945, B. P. Bishop Museum, Occ. Papers 18 (8): 133, text fig. 1 (Society Islands, Tahiti Nui, Papenoo Valley).
- wheatleyana** Pilsbry and Cooke, **Achatinella elegans** var., 1913, Manual of Conchology II, 22: 168, pl. 28, figs. 11, 11a (Oahu, Punaluu).
- whitei** Cooke, **Amastra**, 1917, B. P. Bishop Museum, Occ. Papers 3 (3): 232, pl. C, fig. 4 (Hawaii, Kahauloa).

ADDENDUM

- arnemanni** Cooke and Kondo, **Partulina**, 1952, B. P. Bishop Museum, Occ. Papers 20 (20): 346, fig. 6, *a* (Oahu, Kahuku Point near airfield).
- evelynae** Cooke and Kondo, **Carelia pilsbryi** subsp., 1952, B. P. Bishop Museum, Occ. Papers 20 (20): 335, fig. 3, *a-d* (Kauai, Lepeuli, Kilauea, Moloaa).
- Hiona** Cooke, 1940, B. P. Bishop Museum, Bull. 165: 106. [Genotype, *Hiona platyla* (Ancey).]
- Kaala** Cooke, 1940, B. P. Bishop Museum, Bull. 165: 106. [Genotype, *Kaala subrutila* (Mighels).]
- magnapustulata** Cooke and Kondo, **Carelia paradoxa**, geographical race, 1952, B. P. Bishop Museum, Occ. Papers 20 (20): 341, fig. 5, *a-c* (Kauai, Kilauea to Anahola, including Lepeuli, Kaakaaniu, Moloaa, Papaa, Aliomanu).
- moloaensis** Cooke and Kondo, **Carelia olivacea** subsp., 1952, B. P. Bishop Museum, Occ. Papers 20 (20): 338, fig. 4, *a-f* (Kauai, Kilauea, Pilaa, Lepeuli, Moloaa-Kaakaaniu region, Papaa, Aliomanu, Anahola).

- perantiqua** Cooke and Kondo, **Partulina dubia** subsp., 1952, B. P. Bishop Museum, Occ. Papers 20 (20) : 344, fig. 6, *c* (Oahu, Kahuku Point, near wireless station and air-field).
- Piena** Cooke, 1940, B. P. Bishop Museum, Bull. 165 : 108. (Sectional type, *Philonesia grandis* Baker.)
- waipouliensis** Cooke and Kondo, **Carelia paradoxa**, geographical race, 1952, B. P. Bishop Museum, Occ. Papers 20 (20) : 340; see also 1931, B. P. Bishop Museum, Bull. 85 : pl. 17, figs. 1-6 (Kauai, Oloheua, northwest corner of Waipouli race track).
- tsunami** Cooke and Kondo, **Carelia pilsbryi** subsp., 1952, B. P. Bishop Museum, Occ. Papers 20 (20) : 335, fig. 3, *a-d* (Kauai, Lepeuli, Kilauea, Moloaa).

A LIST OF RECENT PLANTS DESCRIBED BY C. M. COOKE, JR.,
WITH THEIR ORIGINAL REFERENCES
AND TYPE LOCALITIES

- baldwinii** Cooke, **Cephalozia**, 1904, Connecticut Academy of Arts and Sciences, Trans. 12 : 35, pl. 13, figs. 1-9 (west Maui).
- hawaica** Cooke, **Lepidozia**, 1904, Connecticut Academy of Arts and Sciences, Trans. 12 : 8, pl. 2, figs. 13, 14 (Oahu, Nuuanu; west Maui).
- heteroica** Cooke, **Cephalozia**, 1904, Connecticut Academy of Arts and Sciences, Trans. 12 : 38, pl. 15 (Kauai, Kilohana).
- kilohanensis** Cooke, **Cephalozia**, 1904, Connecticut Academy of Arts and Sciences, Trans. 12 : 37, pl. 14 (Kauai, Kilohana).
- lilae** Cooke, **Cephalozia**, 1904, Connecticut Academy of Arts and Sciences, Trans. 12 : 36, pl. 13, figs. 10-20 (Oahu, Nuuanu).
- nuuanuensis** Cooke, **Bazzania**, 1904, Connecticut Academy of Arts and Sciences, Trans. 12 : 15, pl. 3, figs. 23-31 (Oahu, west ridge of Nuuanu).

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- 1906, July, On Hawaiian species of *Sphyradium*, Academy of Natural Sciences, Philadelphia, Proc. 58 : 215-216, text figs. 1-3. (With H. A. Pilsbry.)
- 1908, July, Hawaiian species of *Helicina*, B. P. Bishop Museum, Occ. Papers 3 (2) : 199-200. (With H. A. Pilsbry.)
- 1908, July, A new species of *Lyropupa* from Hawaii, B. P. Bishop Museum, Occ. Papers 3 (2) : 211-212.
- 1908, July, Three new species of *Amastra* from Oahu, B. P. Bishop Museum, Occ. Papers 3 (2) : 213-216, text figs. 1-3.
- 1908, July *Amastra* (*Laminella*) *kuhnsi*, B. P. Bishop Museum, Occ. Papers 3 (2) : 217-218, one text fig.
- 1908, December [Feb. 1909], On the teeth of Hawaiian species of *Helicinidae*, Academy of Natural Sciences, Philadelphia, Proc. 60 : 560, 2 text figures. (With H. A. Pilsbry.)
- 1910, July, Genus *Leptachatina*, Manual of Conchology II, 21 : 1-64, pls. 1-9.
- 1912, November, Genus *Newcombia*, Genus *Partulina* (in part), Manual of Conchology II, 22 : 1-64, pls. 1-12. (With H. A. Pilsbry.)
- 1913, October, A new sinistral *Amastra*, *Nautilus* 27 : 68-69.
- 1913, October, Genus *Partulina* (in part), Manual of Conchology II, 22 : 65-112, pls. 13-26. (With H. A. Pilsbry.)
- 1913, December, Genus *Partulina* (concluded), Genus *Achatinella* (in part), Manual of Conchology II, 22 : 113-176, pls. 27-37. (With H. A. Pilsbry.)
- 1914, June, Genus *Achatinella* (concluded), Manual of Conchology II, 22 : 177-428, pls. 40-63. (With H. A. Pilsbry.)
- 1914, October, *Tornatellinidae* (Introduction), Appendix to *Amastridae* (in part), Manual of Conchology II, 23 : i-xi, 1-48, pls. 1-13. (With H. A. Pilsbry.)
- 1914, November, Description of a new species of *Tornatellides*, *Nautilus* 28 : 79-80.
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