

The division is governed by the formula:

$$s = R \tan^{-1} \frac{x}{a}$$

in which x is the part of a central division to be measured,

a being the length of a central division, and

- R the radius of the circular arc.
- s is the corresponding length of the circular arc (see Fig. 4).

THE DISCOVERERS OF THE FIJI ISLANDS

by

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To all those interested in the history of Polynesia, Professor HENDERSON'S scientific study of the original discoverers of the numerous islands embraced in the Fiji Group will come as a valuable addition to their libraries. The author having spent eight years sailing in those waters has been able to follow the actual tracks of the early navigators TASMAN, COOK, BLIGH, WILSON and BELLINGSHAUSEN, and having studied their original journals and maps and compared them with the more recent charts of the British Admiralty, has been able to produce a really authoritative account of the islands, reefs, etc. discovered by each of them; the general plan of the book being to recount the story of each discoverer from the time of approaching the islands of Fiji to the time they were lost to view.

The book is divided into 15 chapters: Chapter I describes the difficulties with which these early Navigators had to contend owing to lack of charts and the means of accurately determining their position at sea. Chapters II to VI are devoted to TASMAN's voyage in 1642-3 when in command of two ships, the yacht *Heemskercq* and the flute Zeehaen. Chapter IV also describes the Great Chart of the South Seas compiled by Hessel GERRITSZ in 1634 which is in the possession of the Dépôt de la Marine, Paris, and is frequently referred to in TASMAN'S journal. The author deplores the fact that the original name "Heemskercq Reef" has since been changed to "Nanuku Reef" and discourses on the pity of changing original names. Chapter VII deals with Captain Cook's second voyage to the Pacific in 1772 when in command of the two ships *Resolution* and *Adventure*; and chapter VIII with BLIGH's voyage in the launch of the *Bounty* in 1789 after the famous mutiny It is compiled chiefly from his log-book, a signed copy of which is in the Mitchell Library, Sydney. Chapter IX deals with BLIGH's second visit to Fiji in 1792 in H.M.S. *Providence* with the *Assistant* as consort, and the following chapter is devoted to a discourse on the character of BLIGH and of Fletcher CHRISTIAN and the other mutineers of the *Bounty*.

Chapter XI describes the discoveries of Captain James WILSON in 1797 when in command of the missionary ship Duff, chiefly from information contained in a "Narration of the Voyage compiled from Journals of the officers and missionaries, etc." and Chapter XII those of BELLINGSHAUSEN, sailing in the service of the Russian Government in 1820 in command of the two sloops *Vostock* and *Mirnyi*, compiled from his journal, a translation of which into English was completed in 1930 by the Royal Georgaphical Society, London. Chapters XIII and XIV are devoted to "Alleged Discoveries", under which heading are included the voyages of Mr. OLIVER, Master's Mate of H.M.S. *Pandora* 1790-1, Captains BARBER of the *Arthur* 1794, Bentley of the *Ann and Hope* 1799 and DUMONT D'URVILLE of the *Astrolabe* 1827, the author remarking that although they sailed through the archipelago it is doubtful whether they can be considered as *discoverers* of any part of it except perhaps in the case of Captain BENTLEY who was the first white man to see Vatu Leile Island, the south-west corner of Viti Levu, and Malolo Island with its neighbouring islets and reefs.

Chapter XV compares the various discoveries with the object of awarding pre-eminence to one or the other. Finally the sources of information in compiling the book are given, with notes on manuscripts, charts, illustrations and local investigations. The book contains numerous reproductions of original charts and of portions of modern charts on which the tracks of the discoverers have been plotted, also other interesting illustrations such as "a double page from BLIGH's Log of the launch of the *Bounty*", portraits of the Explorers and pictures of their ships.

J. D. N.

DIE VERSCHOLLENE COLUMBUS-KARTE VON 1498 IN EINER TÜRKISCHEN WELTKARTE VON 1513

(THE LOST MAP OF COLOMBUS, 1498. IN A TURKISH GENERAL CHART OF 1513).

by

PAUL KAHLE.

(8vo. Walter DE GRUYTER & Co., Berlin and Leipzig, 1933, 52 pp. 9 facsimile charts. Price : 5 Rm.).

While engaged in researches in the Seraglio Library at Constantinople, Dr. Paul KAHLE of Bonn, already known for his book in 1926 on the sailing directions for the Mediterranean compiled in 1521 by the Turkish Admiral PIRI RE'IS, discovered the general chart showing the western part of the world drawn in 1513 by Admiral PIRI RE'IS. This chart is of particular interest in that it bears an inscription indicating that use was made of various charts in compiling it — two world maps, an Arab map of India, four up-to-date Portuguese charts, and finally CHRISTOPHER COLUMBUS' MAP.

Dr. KAHLE has come to the conclusion that the last is none other than that which the celebrated navigator sent to Spain in 1498 and which was lost. It is possible that Admiral PIRI obtained this chart, as indicated by a legend on his map, through one of his uncle's (KEMAL RE'IS) Spanish slaves who had sailed to America several times with COLUMBUS. The date of this capture would be about the year 1501, when KEMAL RE'IS had fought seven Spanish ships off Valencia.

Dr. KAHLE states that the north-western portion of PIRI's chart, which shows just those waters traversed by COLUMBUS, is evidently based upon older material than the other parts of the chart. The portion embracing the Lesser Antilles, Virgin Islands,