arms, called the Tejo Novo (the only one practicable for ships) and the Mar de Pedro, and these arms enclose a deltaic formation, a low tract of marshy alluvium known as the Lezirias, traversed by several natural canals or minor branches of the river. Both these arms enter the upper end of the fine Bay of Lisbon (11½ miles long by about 7 broad), and the Tagus leaves this bay in the form of a channel 4½ miles long by 2 wide (see vol. xiv. p. 692), communicating with the ocean, but having unfortunately a bar at its mouth. On the north side of this channel stands the city of Lisbon. Only slight traces are still to be found of the gold for which the sands of the Tagus were anciently celebrated.

The narrower part of the Tagus basin lying to the south, the tributaries on the left bank are almost all mere brooks, most of which dry up in summer. The principal exception is the Rio Zatas or Sorraya, which, rising in the Serra d’Ossa, flows westwards across the plateau of Alemtejo, and joins the Mar de Pedro. The principal tributaries on the right bank, besides the Zezere, are the Jarama, descending from the tableland of New Castile a little below Aranjuez, the Alberche and the Tietar, which collect their head waters from opposite sides of the Sierra de Gredos, and the Alagon, from the rough and broken country between the Sierras de Gredos and Gata.

TAHITI ARCHIPELAGO. The eastern Polynesian island-group generally known as the Society Islands (*Isles de la Société,* or *Taïti*) lies between 16° and 18° S. lat. and 148° and 155° W. long., and stretches for nearly 200 miles in a north-west and south-east direction ; the total area does not exceed 650 square miles, of which 600 fall to Tahiti alone. To the east and north-east a channel of only 140 miles in breadth, but over 2000 fathoms in depth, separates this group from the great chain of the Low Islands, beyond which the ocean extends unbroken to America. To the west as far as Fiji—the main islands of which group lie between the same degrees of latitude as those of Tahiti— there are 1500 miles of open water. About 300 miles south­west lies Cook’s Archipelago, and at the same distance south are the Austral Islands. To the north, excepting a few coral banks, there is open sea to Hawaii, a distance of 2600 miles.

Tahiti occupies a central position in the Pacific. Sydney lies about 3400 miles to the west and San Francisco about as far to the north-north-east. Honolulu, Noumea, and Auckland are each somewhere about 2400 miles away ; Panama is at a distance of 4600 miles.

The archipelago consists of eleven islands, which are divided into two clusters—the Leeward and the Wind­ward Islands—by a clear channel of 60 miles in breadth. The Leeward Islands, to which alone the name of Society Islands was given by Cook, are Tubai or Motu-iti, a small uninhabited lagoon island, the most northern of the whole archipelago ; Maupiti or Mau-rua—“ Double Mountain,” the most western ; Bora-bora (Bola-Bola of the older navigators), or Fáarui ; Tahaa ; Raiatea or Ulietea (Boen- shea’s Princessa), the largest island of this cluster, and Huahine, which approach each other very closely, and are encircled by one reef. To the Windward Islands, the Georgian Islands of the early missionaries, belong Maiaiti or Tapamanu (Wallis’s Sir Charles Saunders Island and Boenshea’s Pelada) ; Morea or Eimeo (Wallis’s Duke of York Island and Boenshea’s San Domingo); Tahiti—Cook’s Otaheiti (probably Quiros’s Sagittaria; Wallis’s King George’s Island, Bougainville’s Nouvelle Cythère, and Boenshea’s Isla d’Amat), the most southern and by far the largest of all the islands ; Tetuara or Tetiaroa—“ The Distant Sea ” (?Quiros’s Fugitiva; Bougainville’s Umaitia and Boenshea’s Tres Hermanos) ; and Matia or Maitea (? Quiros’s La Dezana, Wallis’s Osnaburg Island, Bougain­ville’s Boudoir and Pic de la Boudeuse, and Boenshea’s San Cristoval), which is by a degree the most eastern of the archipelago. Bellinghausen, Scilly, and Lord Howe (Moρia) are three insignificant clusters of coral islets to the north ■west and west, and, like Tubai and Tetuara, are atolls. The length of the Tetuara reef ring is about six miles ; it bears ten palm-covered islets, of which several are in habited, and has one narrow boat-passage leading into the lagoon. With the exception just named, the islands, which agree very closely in geological structure, are mountainous, and present perhaps the most wonderful example of volcanic rocks to be found on the globe. They are formed of trachyte, dolerite, and basalt. There are raised coral beds high up the mountains, and lava occurs in a variety of forms, even in solid flows ; but all active volcanic agency has so long ceased that the craters have been almost entirely obliterated by denudation. Hot springs are unknown, and earthquakes are slight and rare. Nevertheless, under some of these flows remains of plants and insects of species now living in the islands have been found,—a proof that the formation as well as the denuda­tion of the country is, geologically speaking, recent. In profile the islands are rugged. A high mountain, usually with very steep peaks, forms the centre, if not the whole island ; on all sides steep ridges descend to the sea, or, as is oftener the case, to a considerable belt of flat land. These mountains, excepting some stony crags and cliffs, are clothed with dense forest, the soil being exceptionally fertile. All voyagers agree that for varied beauty of form and colour the Society Islands are unsurpassed in the Pacific. Innumerable rills, fed by the fleeting clouds which circle round the high lands, gather in lovely streams, and, after heavy rains, torrents precipitate themselves in grand cascades from the mountain cliffs—a feature so striking as to have attracted the attention of all voyagers, from Wallis downwards. Round most of the islands there is a luxuriant coral growth ; but, as the reefs lie at no great distance, and follow the line of the coast, the inter­island channels are safer than those of the neighbouring Tuamotus, which exhibit the atoll formation in perhaps its fullest development, and in consequence have been justly called the “Low” or “Dangerous Archipelago.” Maitea, which rises from the sea as an exceedingly abrupt cone, and Tapamanu appear to be the only islands which have not their fringing and more or less completely encircling barrier-reefs.@@1 The coasts are fairly indented, and, protected by these reefs, which often support a chain of green islets, afford many good harbours and safe anchorages. In this respect the Society Islands have the advantage of most of the Polynesian groups.

The island of Tahiti, in shape not unlike the figure 8, has a total length of 35 miles, a coast-line of 120, and a super­ficial area of 600 square miles. It is divided into two distinct portions by a short isthmus (Isthmus de Taravao) less than a mile in width, and nowhere more than 50 feet above sea-level. The southern, the peninsula of Tairabu, or Tahiti-iti (Little Tahiti), alone as large as Raiatea (after Tahiti the most important island of the group), measures 12 miles in length by 6 miles in breadth ; while the northern, the circular main island of Porionuu, or Tahiti-uni (Great Tahiti), has a length of 23 miles and a width of 20. The whole island is mountainous. A little to the north-west of the centre of Great Tahiti the Society Islands attain their greatest altitude. There the double­peaked Orohena rises to 7340 feet, and Aorai, its rival, is only a few hundred feet lower. Little Tahiti cannot boast of such mountains, but its tower-like peaks are very striking. The flat land of the Tahitian coast, extending to a width of several miles—with its chain of villages, its

@@@1 Darwin, *Structure of Coral Reefs,* London, 1842.