MADAGASCAR RELIEF AND MAIN TYPES OF LANDSCAPE

par

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With a length of 995 miles from Diego-Suarez to Cap Sainte-Marie and a maximum width of 360 miles, Madagascar is the third largest island in the world, coming after New Guinea and Borneo (Australia is considered to be a sub-continent). Upon arriving at Tananarive by air from Djibouti or Nairobi one's first impression is of a land of turbulent relief and denuded hills with many reddish gashes etched by accelerated erosion in a thick lateritic cover. However, at no point does the island reach an altitude of 10,000 ft; the highest summit is in the Tsaratanana massif in the extreme north of the island, with a height of 9,468 ft; then comes the Pic Boby, on the Andringitra massif, in south central Madagascar with a height of 8,720 feet and Tsiafajavona, summit of the Ankaratra volcanic massif in the centre of the island, which is 8,672 feet in height.

One of the main characteristics of the physical geography of Madagascar is its asymmetry. This asymmetry is evident firstly in the relief: the long slope of the island faces the Mozambique Channel, while the descent to the Indian Ocean is shorter and more abrupt. The geological structure is also asymmetrical, since the two great sedimentary basins, the Majunga and Morondava basins, are on the west coast, while on the east coast there is only a narrow, broken sedimentary strip. These factors explain the asymmetry of the hydrographic system: all the main rivers, or at least the longest ones, flow towards the west or northwest and are tributaries of the Mozambique Channel (the Onilahy, the Mangoky, the Tsimihihina to the south of Cap Saint-André; the Mahavavy from the south, the Betsiboka, the Mahajamba and the Sofia to the north of Cap Saint-André). This asymmetry is also reflected in the climatology: the eastern slope of the island, which is exposed to the south-east trade wind, has the heaviest rainfall (up to 158 in of rain per annum at Maroantsetra and more than 120 in at Tamatave), while the rainfall decreases towards the west, Tulear in the far south-west having the lowest rainfall (14 in).

With regard to its relief, Madagascar may be divided into three large zones: the crystalline highlands with a generally jumbled relief of hills or small mountains, with local residual evidence of old erosion surfaces conserved in the form of steps (the 'tampoketsa'); the great eastern escarpment, with mountains or high hills whose steep slopes are covered by the great tropical rain forest or, more frequently, by its degraded forms.
Fig. 1. The relief of Madagascar, 1. Below 1000 feet, 2. Between 1000 and 3000 feet, 3. Between 3000 and 6000 feet, 4. Over 6000 feet.