To document the Venezuelan cetacean fauna and its distribution in the eastern Caribbean, sighting, stranding, and capture records of whales and dolphins for Venezuela were assembled and analyzed. An attempt was made to confirm species identification for each of the records, yielding 443 that encompass twenty-one species of cetaceans now confirmed to occur in Venezuelan marine, estuarine, and freshwater habitats. Bryde’s whale (Balaenoptera edeni) is the most commonly reported mysticete while the long-beaked common dolphin (Delphinus capensis) is the most frequent of the odontocetes in marine waters. The boto or tonina (Inia geoffrensis) was found to be ubiquitous in the Orinoco watershed. The distribution of marine records is consistent with the pattern of productivity of Venezuelan marine waters, i.e., a concentration at 63°07’ W through 65°26’ W with records declining to the east and to the west. An examination of the records for all cetaceans in the Caribbean leads us to conclude that seven additional species may be present in Venezuelan waters.