Volatile oils extracted by hydrodistillation from six plant species growing in the Kenyan coast, Croton pseudopulchellus Pax, Mkilua fragrans Verdc. (Annonaceae), Endostemon tereticaulis (poir.) Ashby, Ocimum forskolei Benth., Ocimum fischeri Guerke and Plectranthus longipes Baker (Labiateae), were evaluated for repellency on forearms of human volunteers against Anopheles gambiae sensu stricto. All oils were found to be more repellent (RC50 range = 0.67-9.21 x 10(-5) mg cm(-2)) than DEET (RC50 = 33 x 10(-5) mg cm(-2)). The individual components of the oils were identified by GC-MS and GC co-injections with authentic standards. The repellency of 15 of the main constituents of the different oils (which had not been previously assayed) was evaluated. Although some of these showed relatively high individual repellencies, none was comparable to the parent essential oils. Partial synthetic blends of selected constituents with moderate or relatively high individual repellency against the vector were also assayed. Four of these exhibited activities comparable to or higher than those of the corresponding parent oils, indicating interesting blend effects in the repellent action of the oils against the mosquito. The implication of these results in the utilization of the plants is discussed.