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Zanthoxylum heitzii, a possible anti-malaria medicine

The Central African plant *Zanthoxylum heitzii* is used by traditional healers against malaria. We have found that the hexane bark extract is active against adults of the mosquito *Anopheles gambiae*, a vector for malaria transmission, and that this is mainly due to its content of the amide pellitorine. Pellitorine also kills *A. gambiae* larvae. In addition, the extract is toxic to the malaria protozoa *Plasmodium falciparum*. In this case, the alkaloid dihydronitidine seems to be the main factor for toxicity. Neither of these compounds have been reported from this plant previously. Eight other substances have been isolated and identified. Seven of these are new to the plant, and one, the alkaloid heitziquinone, is a new natural product. From these investigations, it would seem possible that the traditional use of *Z. heitzii* against malaria may have a rational basis.