Stem bark extracts of *Boerhavia erecta* L. (erect spiderling) and *Amaranthus spinosus* L. (spiny amaranth), two wild growing weed plants used in traditional African medicine, were characterized with respect to their phenolic profile including the betalains. While the main betalains in *A. spinosus* were identified as amaranthine and isoamaranthine, the major betacyanins in *B. erecta* were betanin, isobetanin together with neobetanin. The latter showed higher betacyanin concentrations amounting to 186 mg/100 g, while the former contained 24 mg betacyanins in 100 g of the ground plant material. Extracts of *A. spinosus* were found to contain hydroxycinnamates, quercetin and kaempferol glycosides, whereas catechins, procyanidins and quercetin, kaempferol and isorhamnetin glycosides were detected in *B. erecta*. The amounts of these compounds ranged from 305 mg/100 g for *A. spinosus* to 329 mg/100 g for *B. erecta*.

Key words: *Amaranthus spinosus*, *Boerhavia erecta*, Phenolics