Nowadays there is a resurgence of interest in wild plants for their possible medicinal value in diets, since some epidemiological studies have demonstrated their effectiveness against important diseases. Generally, foods of plant origin contain many bioactive compounds, proteins, energy, vitamins and specific minerals; in addition, the popular wild plant species provide fibre, essential fatty acids and enhance the taste and colour in diets. We studied the nutritional and medicinal potential of leaves of A. subfusiformis and U. urens, collected in Alice, South Africa in November 2006. To assess this we analyzed the phytochemical, antioxidant and antibacterial activities of leaves in acetone, methanol and water extracts, using standard analytical methods. The proximate analysis showed that the leaves of both plant species contained appreciable percentages of moisture; ashes; carbohydrates; crude proteins, lipids and fibres. Elemental analysis of macro and microelements showed higher values for U. urens that contained in decreasing order: iron>manganese>zinc>copper>calcium>potassium>nitrogen>magnesium>phosphorus>sodium, for A. subfusiformis resulted in iron>zinc>manganese>copper>calcium>potassium>nitrogen>sodium>phosphorus>iron. Besides, the chemical composition showed higher concentration of alkaloids, saponins and phytates in A. subfusiformis. The extracts also caused 1, 1-diphenyl-2-picrylhydrazyl (DPPH) and 2, 2-azinobis-3 ethylbenzthiazoline-6-sulfonic acid (ABTS) radical scavenging activities which were comparable to those of ascorbic acid. The extracts of both plants contained appreciable levels of polyphenols and also caused varied inhibition of some bacterial strains used in this study. When the nutrient and chemical constituents of these plants were compared with recommended dietary allowance (RDA) values, the results revealed that the leaves contain an appreciable amount of nutrients, minerals, and phytochemicals and low levels of toxicants. Since the plants also exhibited some level of antibacterial activities, their use for medicinal purposes is to some extent being justified.