

Chapter 3

A rapid botanical survey of the Atewa Range Forest Reserve, Ghana

D.E.K.A Siaw and Jonathan Dabo

SUMMARY

A total of 314 plant species belonging to 71 families were recorded during a rapid biological assessment of the Atewa Range Forest Reserve. An additional 30 leaf specimens were pressed for correct identification. At Atiwiredu, 145 plant species in 43 families were recorded, including three black star species *Gilbertiodendron splendidum*, *Psychotria longituba* and *P. subglabra*. At Asiakwa South, 247 species in 65 families were confirmed including one black star species *Ixora tenuis*. At Asiakwa North, 189 species in 53 families were recorded. Among these were four black star species including two recorded only from this site and also listed on the IUCN Red List, *Neolemonniera clitandrifolia* (EN) and *Sapium aubrevillei* (VU).

INTRODUCTION

The Upper Guinea Forest, which includes the forests of Ghana, ranks among the 34 most important biodiversity Hotspots worldwide (Bakarr et al. 2004). This region is highly threatened by exploitation, agriculture and an increasing human population (Bakarr et al. 2001) and remaining fragments of original forest are generally found in remote, inaccessible areas where forest reserves were established a long time ago (Oates 1999).

The Atewa Range is situated in the Moist Semi-Deciduous forest zone with hill vegetation classified by Hall and Swaine (1976) as Upland Evergreen (UE) Forest type. The Upland Evergreen forest in Ghana is known to be botanically very unique in terms of floral richness and diversity. Hall and Swaine (1981) compiled longer botanical species lists in Upland Evergreen forests than in surrounding lowland Moist Semi-Deciduous forests (MSSD). They also noted that Atewa represents an extreme type of provenance for endemic and highly distinct species (e.g. *Aframomum atewae*, *Medinilla enti*, *Anthocleista obanensis*, *Piper capensis*, *Cyathea manii* and *Rubus pinnatus* var. *afrotropicus*). The Atewa Range Forest Reserve (hereafter referred to as 'Atewa') is known to contain some plant species not found elsewhere in Ghana (e.g. *Piper capensis* (Hawthorne and Abu-Juam, 1995)).

The area of Atewa, designated as such in 1925, is 232 km². Seventy-five percent of the slopes within the range are at an angle greater than 15 degrees. Atewa, one of 214 forest reserves in Ghana, is the 43rd Forest Management Unit (FMU 43) and overall has a forest condition score of 3 indicating that it is considered a slightly degraded, ecologically tolerable forest mosaic with healthy and abundant regeneration of timber trees and other forest plants. Animals that like closed forest tend to thrive in this type of mosaic (Hawthorne and Abu-Juam 1993).

Records show that several botanical surveys (16) of Atewa have been conducted since 1971. In 1986, one survey inventoried trees of the DBH greater than 5 cm. Hawthorne and Abu-Juam (1995) reported 656 species of vascular plants at Atewa. These comprised 323 tree species, 83 shrub species, 155 liane and climber species, 68 herbaceous species, 22 epiphytes and 5 grasses. At least five black star species (species of the highest conservation priority in Ghana) and 33 Gold star species have been recorded in Atewa. The black star species include: *Sapium aubrevillei*, *Psychotria subglabra*, *Neolemonniera clitandrifolia*, *Lecaniodiscus punctatus* and *Ixora tenuis*.