

27. Montane Ericaceous belt (easily identifiable type, E)

27.1. Description

White (1983) refers to Afromontane evergreen bushland and thickets that occur on most of the higher African mountains and that characteristically occupy a large part of the Ericaceous mountain belt. They are also found on the crests and summits of smaller mountains (especially those that are situated close to the ocean or a large lake) or locally on shallow soils within the Afromontane forest belt. Where the ground is not very rocky and has been protected for several years, such as on wetter mountains as the Ruwenzori Mts., almost impenetrable thickets of 3 to 13 m are formed. On drier and rocky slopes, the vegetation is an open community of bushes that is often discontinuous and merges into Afromontane shrubland (see below). Afromontane evergreen bushland and thicket varies greatly in floristic composition, but species of the *Blaeria*, *Erica* and *Vaccinium* Ericaceae genera are nearly always present and sometimes exclusively dominant (White 1983 p. 167 - 168). Hedberg (1951 cited in Friis *et al.* 2010 p. 113) has documented that an Ericaceous belt occurs on all the high mountains of eastern Africa.

Afromontane shrubland occurs on shallow soils and especially exposed rocky ridges. It is much shorter than Afromontane evergreen bushland and thicket and contains stunted individuals that are dominant in the latter vegetation type. However, Afromontane shrubland also contains species that are usually absent from Afromontane evergreen bushland and thicket (White 1983 p. 168).

Ericaceous vegetation occurs at a few places on the East African coast. Evergreen bushland dominated by *Erica* (synonym: *Philippia*) occurs on waterlogged sites of former lagoons or lake basins (White 1983 p. 188). Interestingly, *Syzygium cordatum* is an associate that is listed both for Ericaceous vegetation on Mafia and Pemba islands (White 1983 p. 189) and for tall “elfin” thickets (3 - 7 m) that occur on peaks in the Uluguru mountains (White 1983 p. 168). We did not include coastal Ericaceous vegetation types into the “montane Ericaceous belt” as coastal vegetation is clearly not associated with mountains.

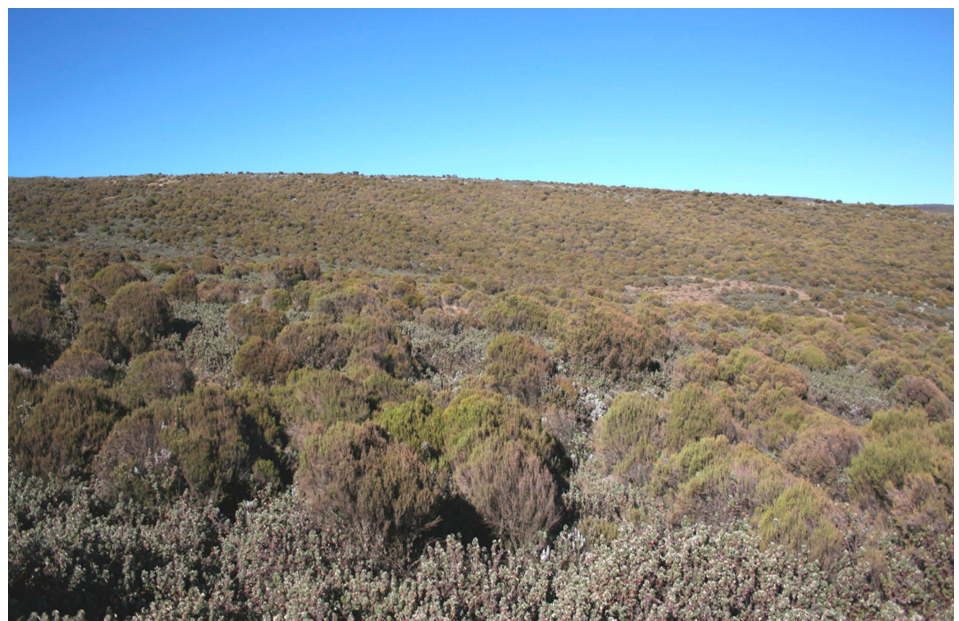
Figure 27.1. Ericaceous belt with *Erica arborea* forming woodland. The floor is completely covered by ferns, mosses and grasses. Bale Mountains (Ethiopia). Approximate altitude 3600 m. Photograph by I. Friis and Sebsebe Demissew (September 2005). Reproduced from Biologiske Skrifter of the Royal Danish Academy of Sciences and letters, Vol. 58, Fig. 29A. 2010.



Figure 27.2. Ericaceous belt with *Erica arborea* forming woodland. This location has more grass than the location shown in Fig. EA. Bale Mountains (Ethiopia). Approximate altitude 3300 m. Photograph by I. Friis and Sebsebe Demissew (September 2005). Reproduced from Biologiske Skrifter of the Royal Danish Academy of Sciences and letters, Vol. 58, Fig. 29C. 2010.



Figure 27.3. Ericaceous belt with burnt vegetation. Numerous shoots (green) appear from the burnt stumps of *Erica arborea*. In between the *Erica arborea* stumps and in the foreground, the subshrub *Alchemilla haumannii* (greyish-green) can be seen. Bale Mountains (Ethiopia). Approximate altitude 3800 m. Photograph by I. Friis and Sebsebe Demissew (September 2005). Reproduced from Biologiske Skrifter of the Royal Danish Academy of Sciences and letters, Vol. 58, Fig. 29B. 2010.





Left: Figure 27.4. The montane Ericaceous belt on the Sabyinyo volcano (Rwandan side of the Virunga mountains). Photograph by V. Minani (May 2007).

Right: Figure 27.5. *Vaccinium stanleyi*, one of the Ericaceae species of the Ericaceous belt in Rwanda. Sabyinyo volcano (Rwandan side of the Virunga mountains). Photograph by V. Minani (May 2007).



Figure 27.6. *Erica kingaensis* subsp. *rugegensis*, one of the Erica species of the Ericaceous belt in Rwanda. Sabyinyo volcano (Rwandan side of the Virunga mountains). Photograph by V. Minani (May 2007)

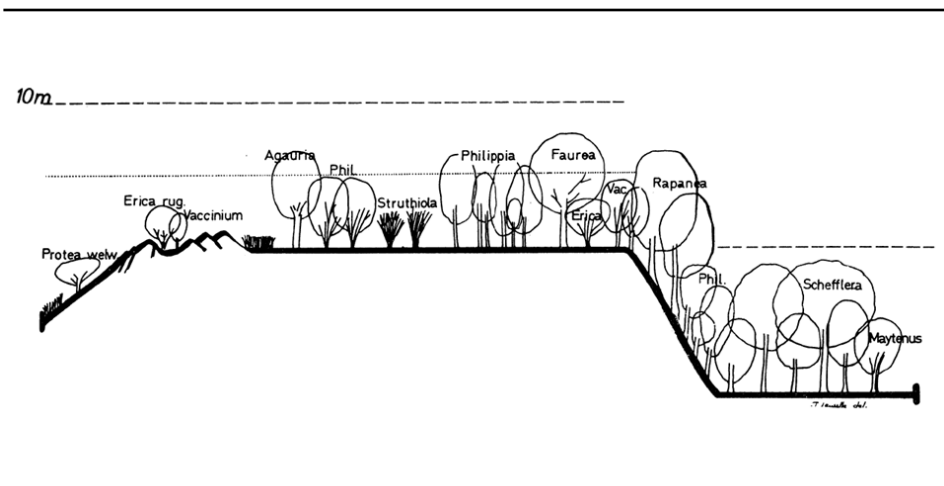


Figure 27.7. Profile diagram of Afromontane Ericaceous bushland ("fruticée sclérophylle à Ericaceae", i.e. sclerophyl scrubland with Ericaceae). This image was the only profile diagram mentioned by White (1983 p. 167) for Afromontane evergreen bushland and thicket. Vegetation similar to the Ericaceous belt occurs on the crests and summits of some smaller mountains as shown below. Lewalle 1972 Fig. 28. Figure obtained from URL URL: <http://www.jstor.org/stable/3667406>

27.2. Species composition

(Please check the methodology and information from Volumes 2 - 5 for more details on how the information on species composition for the different manifestations of this potential natural vegetation type was compiled. In composition tables, "x" indicates that the species is expected to be present, "C" indicates that the species was identified as characteristic species and "f" indicates a species that was not listed in the documentation that we consulted although it is known to occur in the specific country).

Table 27. Species composition for Montane Ericaceous belt (easily identifiable type, E)

SPECIES	Regional status	Ethiopia	Kenya	Malawi	Rwanda	Tanzania	Uganda
<i>Adenocarpus mannii</i>		x	x	f	f	C	f
<i>Agauria salicifolia</i>	Ericaceae	f	C	f	C	f	f
<i>Berberis holstii</i>		x	x	f		f	f
<i>Clematis simensis</i>		x	x		f	f	f
<i>Discopodium eremanthum</i>		x	x			f	f
<i>Dombeya torrida</i>		x	x	f	f	f	f
<i>Erica arborea</i>	Ericaceae	C	C		f	C	x
<i>Erica benguelensis</i>	Ericaceae		f	C	f	f	C
<i>Erica johnstoniana</i>	Ericaceae			f			C
<i>Erica johnstonii</i>	Ericaceae				f		x
<i>Erica kingaensis</i>	Ericaceae				f	f	x
<i>Erica milanjiana</i>	Ericaceae			x			
<i>Erica rossii</i>	Ericaceae		C			C	
<i>Erica trimera</i>	Ericaceae	C	C			f	C
<i>Erica whyteana</i>	Ericaceae		f	x		f	
<i>Faurea saligna</i>			x	f	f	f	x
<i>Gnidia glauca</i>		x	x	f		f	f
<i>Hagenia abyssinica</i>		x	x	f	f	f	f
<i>Hypericum revolutum</i>		C	x	f	f	f	x
<i>Morella salicifolia</i>		x					
<i>Rapanea melanophloeos</i>		C	x	f	f	f	f
<i>Rhus glutinosa</i>		x					

28. *Termitaria* vegetation (easily identifiable and edaphic type, including bush groups around *termitaria* within grassy drainage zones, T)

28.1. Description

Termite mounds that are more than a metre in diameter are usually covered with dense thickets, unless they have been newly built or are in the final stages of erosion. The species composition of these thickets is completely different from that on the surrounding soil. This pattern is particularly true for the Zambebian region where the flora of termite-mound thickets is extremely high (with more than 700 woody species occurring in this habitat in Zambia alone; White 1983 p. 98).

In the Zambebian region, the flat valley bottoms of larger rivers are usually flooded annually or at least seasonally waterlogged. Where the flood water is shallow, "bush-group" grassland often occurs extensively; this is a mosaic of pure grassland and termite-mound thicket (White 1983 p. 100). A similar pattern occurs in the Zanzibar-Inhambane region where dense thickets occur in seasonally-waterlogged grasslands in parts of the coastal plain (White 1983 p. 189). This vegetation type could potentially be described as "wooded grassland", but treating it as a patchwork or mosaic of pure edaphic grassland and sharply defined islands of thickets that occur on the better drained soils of old eroded termite mounds gives a better description of this vegetation type.

From the widespread species that White (1983) listed, the following species were encountered in the Zambian national reference: *Carissa spinarum*, *Diospyros lycioides*, *Euphorbia candelabrum*, *Flueggea virosa*, *Peltophorum africanum*, *Rhoicissus tridentata*, *Steganotaenia araliacea* and *Strychnos potatorum* (White 1983 p. 98).

28.2. Species composition

(Please check the methodology and information from Volumes 2 - 5 for more details on how the information on species composition for the different manifestations of this potential natural vegetation type was compiled. In composition tables, "x" indicates that the species is expected to be present, "C" indicates that the species was identified as characteristic species and "f" indicates a species that was not listed in the documentation that we consulted although it is known to occur in the specific country).

Figure 28.1. Lateral view of a large example of mopane *termitaria* vegetation. The large trees are mopane (roughly 25 m). Photograph by C. Dudley.



Figure 28.2. *Termitaria* vegetation in Kafue National Park (Zambia). The sides with a south-western exposure carry trees, whereas the sides with a north-eastern exposure carry only grassland. Cole 1963 Fig. 9. Image obtained from URL: <http://www.jstor.org/stable/1794828>.





Figure 28.3. T. Mopane termitaria vegetation result in a distinct pattern on aerial photographs. Each patch of Mopane termitaria vegetation is between 10 and 20 m in diameter. Photograph by C. Dudley.

Table 28. Species composition for *Termitaria* vegetation (easily identifiable and edaphic type, including bush groups around *termitaria* within grassy drainage zones, T)

SPECIES	Regional status	Malawi	Zambia	Coast
<i>Colophospermum mopane</i>	dominant species of Mopane woodland	C	C	
<i>Abutilon angulatum</i>		f	x	
<i>Acacia gerrardii</i>			x	f
<i>Acacia nigrescens</i>		x	C	
<i>Acacia nilotica</i>			x	f
<i>Albizia amara</i>			C	
<i>Albizia anthelmintica</i>		x	x	f
<i>Allophylus africanus</i>		x	x	
<i>Antidesma venosum</i>			x	f
<i>Apodytes dimidiata</i>			C	f
<i>Balanites aegyptiaca</i>			x	
<i>Bauhinia petersiana</i>			x	
<i>Berchemia discolor</i>		f	x	f
<i>Boscia angustifolia</i>			C	f
<i>Boscia salicifolia</i>			x	f
<i>Capparis tomentosa</i>		f	x	f
<i>Carissa spinarum</i>	widespread species in Zambezan termite-mound thicket		x	f
<i>Cassia abbreviata</i>		x	x	f
<i>Combretum imberbe</i>			C	f
<i>Combretum molle</i>			C	f
<i>Commiphora africana</i>			x	
<i>Dalbergia melanoxylon</i>		x	x	f
<i>Dichrostachys cinerea</i>			x	f
<i>Diospyros bussei</i>	emergent trees overtopping thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region			C
<i>Diospyros consolatae</i>	thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region			C
<i>Diospyros lycioides</i>	widespread species in Zambezan termite-mound thicket		x	
<i>Diospyros mespiliformis</i>		f	C	f
<i>Dobera glabra</i>	emergent trees overtopping thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region		x	C
<i>Dombeya kirkii</i>		f	x	
<i>Dombeya rotundifolia</i>			x	
<i>Entandrophragma caudatum</i>			x	
<i>Erythrina abyssinica</i>			C	f
<i>Erythrophleum suaveolens</i>			C	f
<i>Euclea divinorum</i>			x	f
<i>Euclea natalensis</i>	thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region; characteristic genus in Zambezan termitaria		x	C
<i>Euclea racemosa</i>			x	f
<i>Euphorbia candelabrum</i>	widespread species in Zambezan termite-mound thicket		C	f
<i>Ficus sycomorus</i>			x	f
<i>Flacourtia indica</i>			x	f
<i>Flueggea virosa</i>	widespread species in Zambezan termite-mound thicket		x	f
<i>Garcinia livingstonei</i>			C	f
<i>Grewia bicolor</i>		x	x	
<i>Kigelia africana</i>		f	x	f
<i>Kirkia acuminata</i>		f	C	
<i>Landolphia kirkii</i>			x	f
<i>Lannea discolor</i>			x	
<i>Lannea schweinfurthii</i>		x	C	f
<i>Lonchocarpus capassa</i>		f	x	f
<i>Manilkara mochisia</i>	emergent trees overtopping thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region	x	C	C
<i>Margaritaria discoidea</i>			x	f
<i>Markhamia obtusifolia</i>			x	f
<i>Markhamia zanzibarica</i>		x	C	f
<i>Maytenus senegalensis</i>			x	f
<i>Olea europaea</i>	(<i>Olea europaea</i> ssp. <i>cuspidata</i> , synonym: <i>Olea africana</i>)		x	f
<i>Oncoba spinosa</i>			x	
<i>Oxytenanthera abyssinica</i>	(lowland bamboo species indigenous to Africa)		x	
<i>Parinari curatellifolia</i>			C	f
<i>Peltophorum africanum</i>	widespread species in Zambezan termite-mound thicket		C	f
<i>Phoenix reclinata</i>	(palm species)		x	f

SPECIES	Regional status	Malawi	Zambia	Coast
<i>Phytolacca dodecandra</i>			x	
<i>Piliostigma thonningii</i>			x	f
<i>Psydrax parviflora</i>			x	
<i>Pterocarpus angolensis</i>			x	f
<i>Rhoicissus tridentata</i>	widespread species in Zambebian termite-mound thicket		x	f
<i>Rhus tenuinervis</i>			x	
<i>Schinziophyton rautanenii</i>			x	
<i>Senna singueana</i>			x	f
<i>Sideroxylon inerme</i>	thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region		x	C
<i>Steganotaenia araliacea</i>	widespread species in Zambebian termite-mound thicket		x	
<i>Sterculia africana</i>			C	f
<i>Sterculia quinqueloba</i>		x	x	f
<i>Strychnos lucens</i>			x	
<i>Strychnos potatorum</i>	widespread species in Zambebian termite-mound thicket		C	
<i>Syzygium cordatum</i>			C	f
<i>Syzygium guineense</i>			C	f
<i>Tamarindus indica</i>	emergent trees overtopping thickets on termite mounds in seasonally-waterlogged grassland in the Zanzibar-Inhambane region	x	x	C
<i>Thespesia garckeana</i>			C	
<i>Uapaca kirkiana</i>			x	
<i>Uapaca nitida</i>			x	f
<i>Uapaca sansibarica</i>			x	f
<i>Vitex doniana</i>			x	f
<i>Ximenia americana</i>			x	f
<i>Zanthoxylum chalybeum</i>			x	f
<i>Ziziphus mucronata</i>		x	C	f