FIGURE 10A STRATIGRAPHY OF THE JODENSAVANNE REGION.

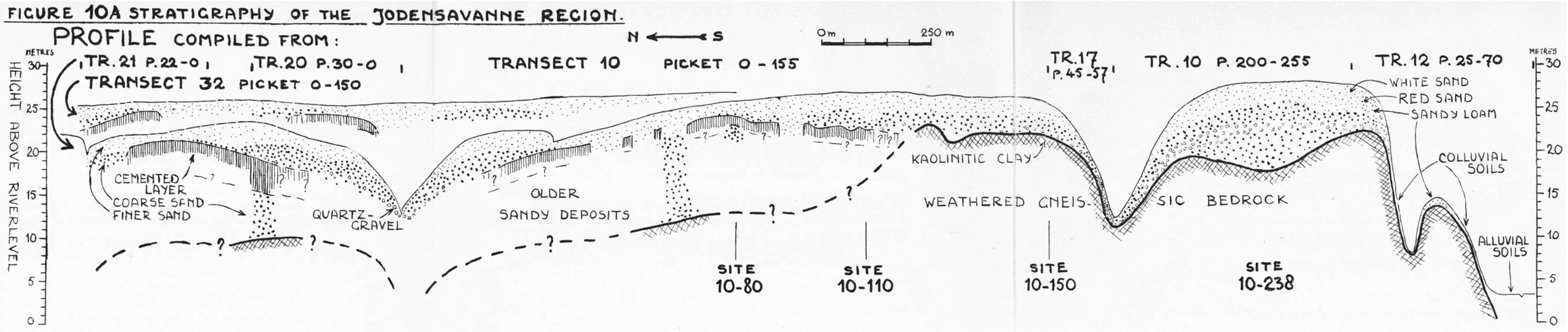


FIGURE 10B SKETCH OF VEGETATION.

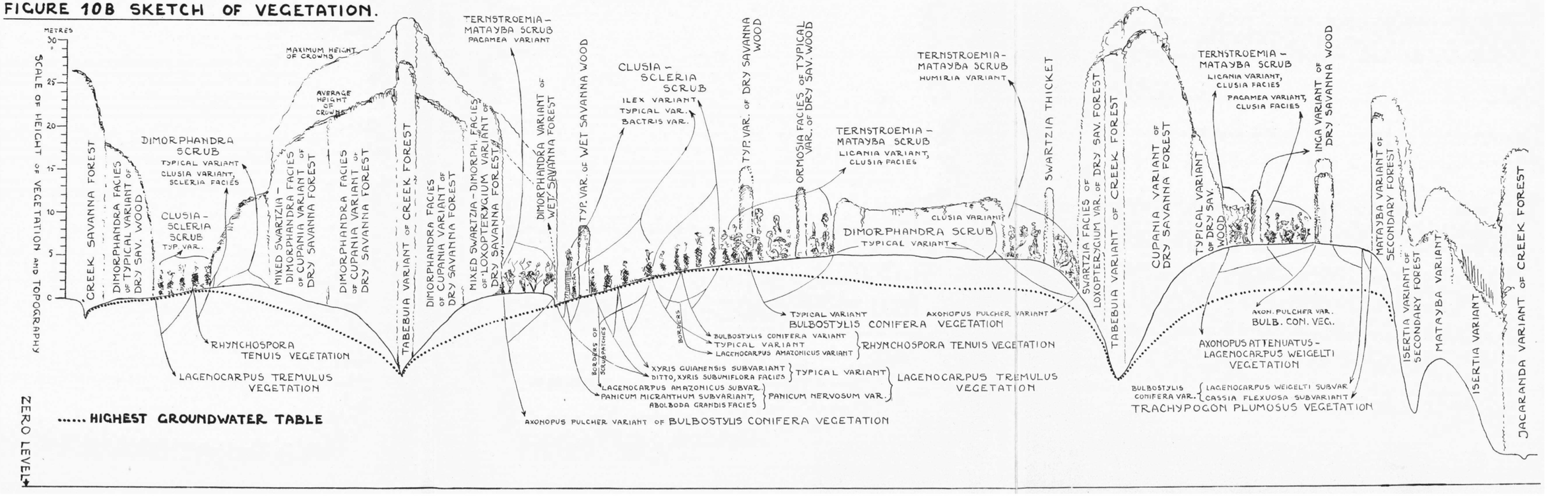


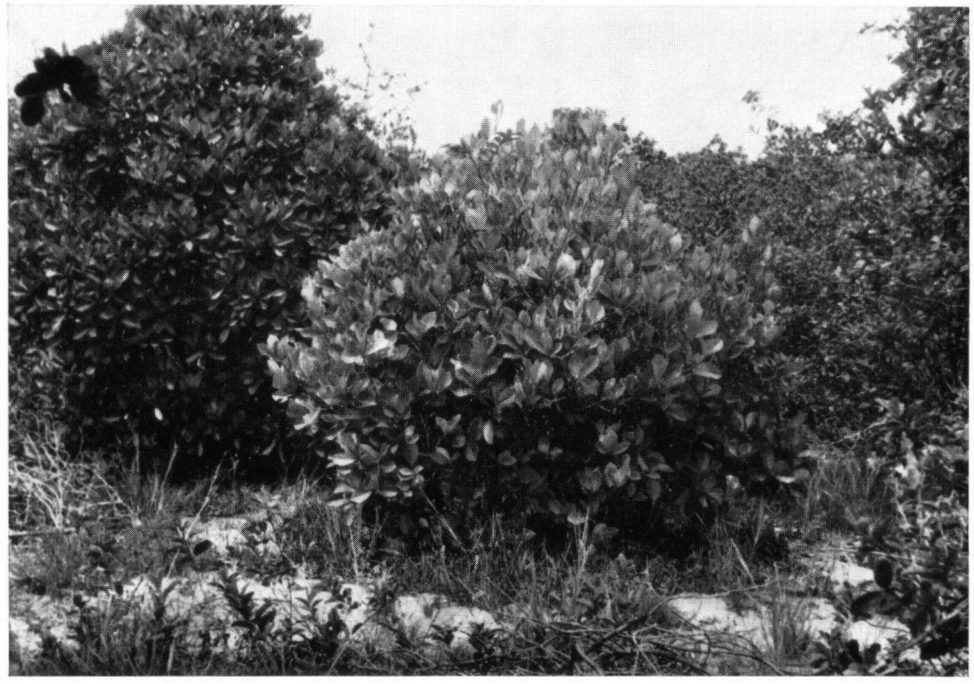
PLATE 1

Photograph 2. Open part of the dry savanna with the *Axonopus pulcher* variant of the *Bulbostylis conifera* vegetation. The bushes belong to the *Humiria floribunda* variant of the *Ternstroemia punctata — Matayba opaca* scrub. The tufts of grass are *Trachypogon plumosus*; the minute tufts are mainly *Bulbostylis conifera*. In the centre a single *Ternstroemia* whose leafy branches nearly touch the ground. In the left corner of the foreground part of a *Humiria* belt (site 17–116).

Photograph 3. Detached *Ternstroemia* shrub, surrounded by a belt of *Humiria* shrublets with decumbent branches. In the background the *Matayba* variant of the secondary forest. In the foreground the *Axonopus pulcher* variant of the *Bulbostylis conifera* vegetation (cf. fig. 29). The height of the pickets is about 1.25 m (site 11–10).

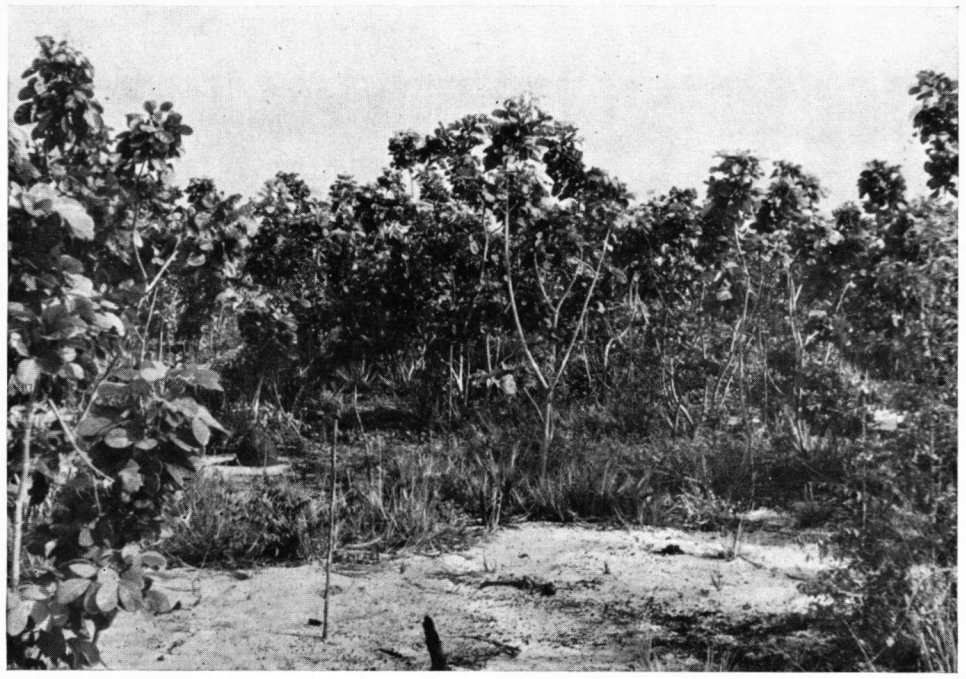
PLATE 2

Photograph 4. Typical variant of the *Bulbostylis conifera* vegetation (cf. fig. 29). In the background once more a belt of *Humiria* round a bush belonging to the *Humiria* variant of the *Ternstroemia — Matayba* scrub. The distance between the short sticks is 2 m (130 m South of site 11–7).



Photograph 5. Two detached and densely leafy shrubs of *Clusia fockeana*, high 1.5 and 2.0 m, surrounded by the *Axonopus attenuatus — Lagenocarpus weigelti* vegetation (site 15–52).

PLATE 3



Photograph 6. Regeneration of *Dimorphandra conjugata* scrub after a fire. The coppice shoots of *Dimorphandra* ramify already near the base, with the result that this vegetation will always remain a scrub (cf. fig. 24). Here and there in the open space the charred remains are seen of shrubs or trees and an *Axonopus attenuatus*—*Lagenocarpus weigelti* vegetation; the large tufts of *Axonopus* are a conspicuous feature of the latter. The height of the pickets is about 1.25 m (site km 3.3 on the truck road).

Photograph 7. Grass savanna South of Redidoti. Typical variant of the *Trachypogon plumosus* vegetation bordering on secondary forest; the latter is the *Matayba* variant containing *Astrocaryum segregatum* (the awara palm). The tree on the right is *Anacardium occidentale* (the cashew) (site 15–220).

PLATE 4

Photograph 8. Typical variant of the *Trachypogon plumosus* vegetation which in the foreground is developed in the *Mesosetum loliiforme* facies. The meshes of the net that rests on the vegetation measure 1 by 1 m, cf. fig. 29 (site 15–246).

Photograph 9. Grass savanna along transect 14 seen from picket 72 towards picket 62. The vegetation is the *Lagenocarpus weigelti* subvariant of the *Bulbostylis conifera* variant of the *Trachypogon plumosus* vegetation. In the background a bush belonging to the *Inga lateriflora* variant of the dry savanna wood. In the foreground *Humiria* belts.

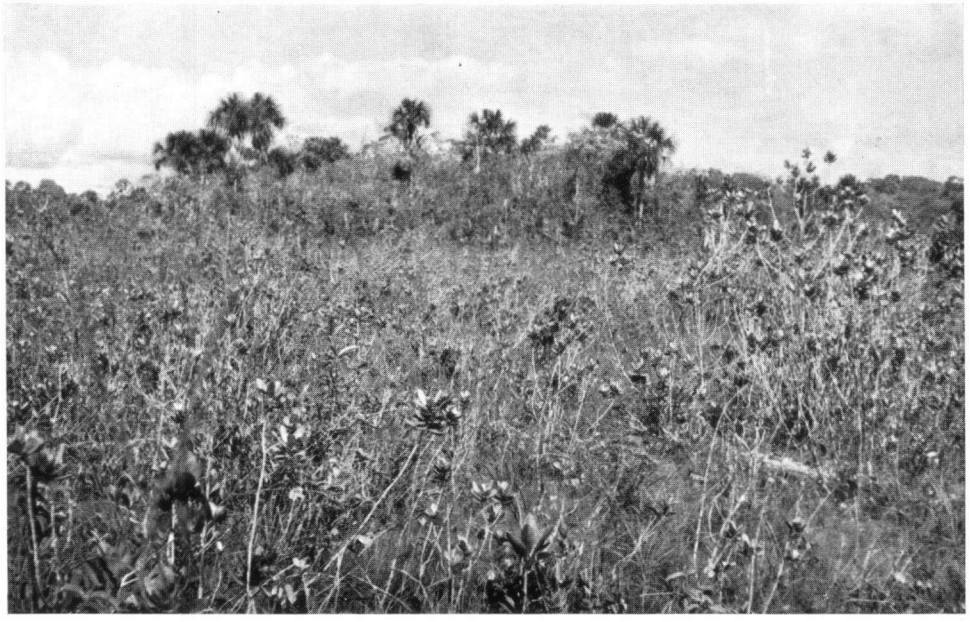
PLATE 5

Photograph 10. *Bulbostylis conifera* variant of the *Trachypogon plumosus* vegetation; in the foreground the *Lagenocarpus weigelti* subvariant on white sand, in the background the denser *Cassia flexuosa* subvariant on red sand (cf. fig. 29). The high grasses are *Trachypogon plumosus* and *Axonopus pulcher*, the minute tufts *Mesosetum loliiforme* and *Bulbostylis conifera*. In the upper half at the left and at the right side a shrublet of *Byrsonima crassifolia* is seen (site 11–5).

Photograph 11. The open space bears the *Bulbostylis conifera* variant of the *Rhynchospora tenuis* vegetation with some large tufts of *Axonopus pulcher*. Near the bushes, which belong to the *Ilex jenmani* variant of the *Clusia fockeana — Scleria pyramidalis* scrub, the vegetation becomes denser; this is the *Lagenocarpus amazonicus* variant of the *Rhynchospora tenuis* vegetation. Transect 10 runs from the middle of the base to the right and is crossed by a path ("tjip-tjippie" or "kepkepi") of the Amerindians (site 10–65).

PLATE 6

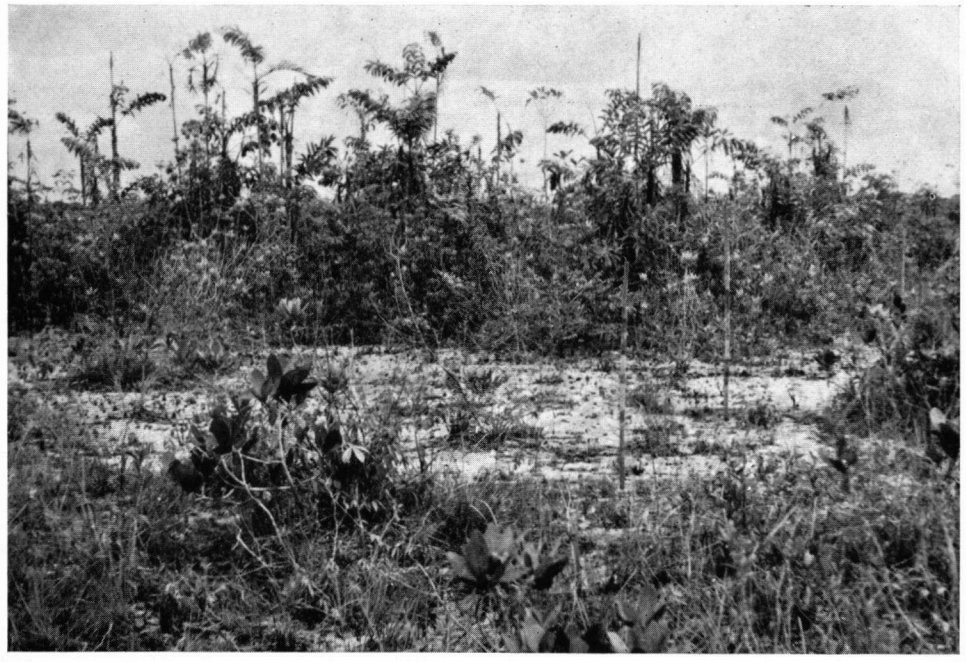
Photograph 12. Typical picture of a wet savanna. The open spaces are covered by the typical variant of the *Lagenocarpus tremulus* vegetation (here the *Xyris spathacea* subvariant); the bushes belong to the *Comolia vernicosa* variant of the *Clusia—Scleria* scrub. Above these bushes, which are hardly more than 1.5 m high, rise *Bactris campestris* (the keskesmaka palm) and *Conomorpha magnoliifolia* (site 32–114).



Photograph 13. Another picture of a wet savanna. The bushes belonging to the *Ternstroemia* facies of the *Comolia—Clusia—Scleria* scrub leave here so little space between them that they form an almost continuous scrub; the remaining gaps are still occupied by the *Xyris spathacea* subvariant. The depauperated *Ternstroemia* specimens should be compared with the large shrubs shown in the photographs 2 and 3. In the background the creek variant of the wet savanna wood with the characteristic emergent morisi palms, *Mauritia flexuosa* (site 32–50).

PLATE 7

Photograph 14. Typical picture of a wet savanna which has repeatedly been burned. To the right a water course with *Mauritia flexuosa* and an undergrowth of obe palms, *Elaeis melanococca*, to the left passing into an open creek-border vegetation with high grasses such as *Hypogynium virgatum* and *Ischaemum guianense*. In the background the creek variant of the wet savanna forest deprived of its enclosing shrub belt by fire. The vegetation in the foreground is the typical *Lagenocarpus tremulus* vegetation with small isolated bushes of the *Licania incana* subvariant of the *Panicum nervosum—Lagenocarpus tremulus* vegetation (cf. photograph 17) (site 32–248).



Photograph 15. The bush in the background belongs to the *Bactris campestris* variant of the *Clusia—Scleria* scrub. It is surrounded by a "white border" bearing the *Panicum polycomum* variant of the *Lagenocarpus tremulus* vegetation. In the foreground the typical variant of the latter (cf. fig. 30) (site 37–22).

PLATE 8

Photograph 16. The bushes represent the *Bactris* variant of the *Clusia–Scleria* scrub, and the ground between them, which shows a hogwallowed surface, is covered by the *Panicum micranthum* subvariant of the *Panicum nervosum—Lagenocarpus tremulus* vegetation. The thin grass is mainly *Paspalum pulchellum*, the coarser leaves belong to *Leptocoryphium lanatum* and to *Lagenocarpus tremulus*. The shoots with the dark capitula belong to *Xyris dolichosperma*. There are also some young specimens of *Bombax flaviflorum* (site 20–65).

Photograph 17. Another aspect of the wet savanna influenced by fire, viz. the *Leptocoryphium lanatum* facies of the typical *Rhynchospora tenuis* vegetation with low bushes belonging to the *Licania* subvariant of the *Panicum nervosum—Lagenocarpus tremulus* vegetation. In the background at the left side the creek variant of the wet savanna forest as well as water courses lined with *Mauritia flexuosa*. Far away in the background the water course shown in photograph 14 (site 32–212).

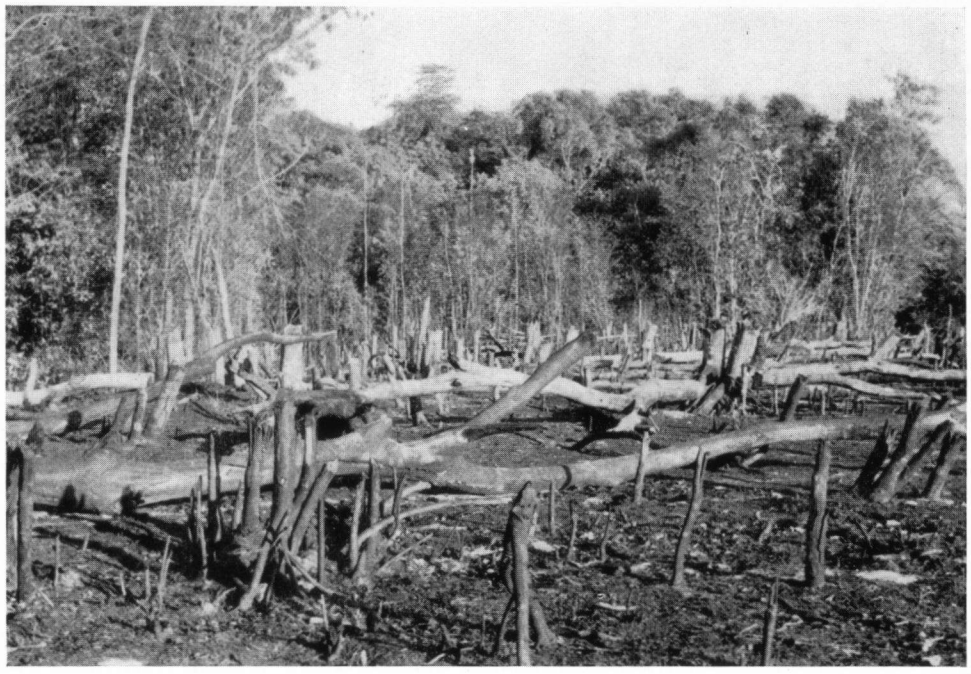
Photograph 18. *Ormosia costulata* thicket. The tree stratum is formed in this picture almost entirely by the crown of a 7.5 m high specimen of *Ormosia*, but *Conomorpha magnoliifolia* is also represented by some specimens. In the undergrowth to the left mainly *Clusia fockeana*, to the right *Licania incana*. The herbaceous vegetation in the foreground is the *Lagenocarpus amazonicus* subvariant of the *Panicum nervosum—Lagenocarpus tremulus* vegetation (site 23–3).

Photograph 19. Old, 5 m high scrub in which *Ternstroemia punctata* nevertheless retains the form of a shrub. It belongs to the *Pagamea capitata* variant of the *Ternstroemia—Matayba* scrub. The undergrowth consists mainly of *Pagamea capitata*, *Humiria floribunda* and *Tetracera asperula* (site 30–34).

Photograph 20. Bush belonging to the *Humiria* variant of the *Ternstroemia—Matayba* scrub exposed to view when transect 16 was cut. The thick stem in the foreground is a *Humiria*, the slanting one in the middle a *Ternstroemia* (site 16–24).

Photograph 21. *Dimorphandra conjugata* facies of the typical variant of the dry savanna wood. The large, contorted tree is a *Dimorphandra*, the erect stems belong mainly to *Licania incana* (site 30–32).

PLATE 12



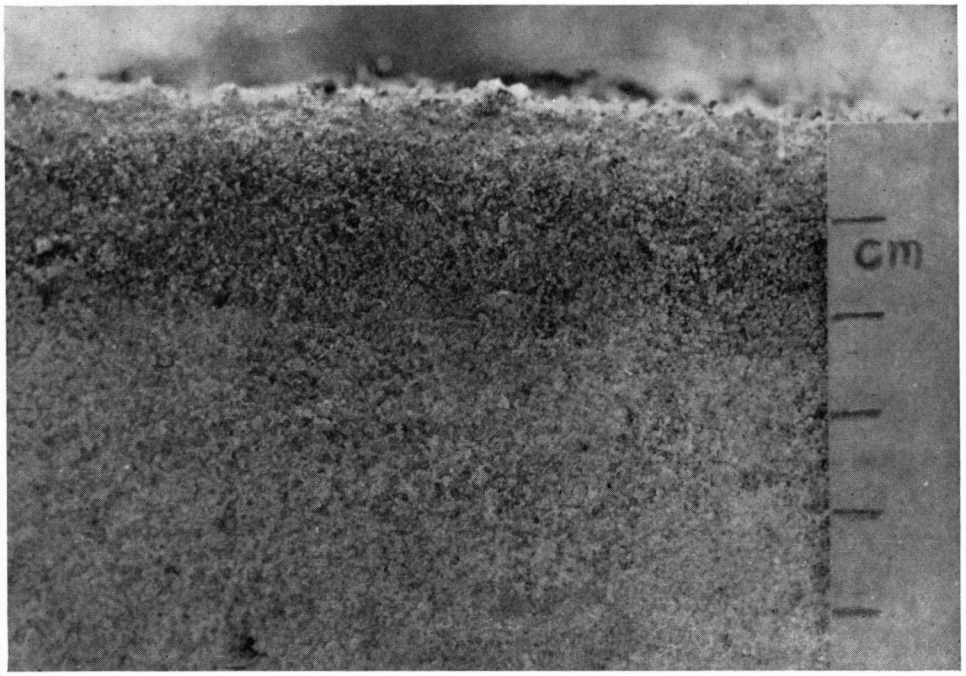
Photograph 22. Part of savanna forest in which the Amerindians have felled the trees and set the desiccated remains on fire. The plot is now ready to grow ananas (pineapple). In the background the *Cupania* variant of the dry savanna forest (North of Redidoti).

Photograph 23. Collapsed wall of the pit dug at site 10–238. The horizontally spreading roots in the layer at a depth of 10 to 20 cm are now hanging down. The sand on the surface was dug out of the pit.

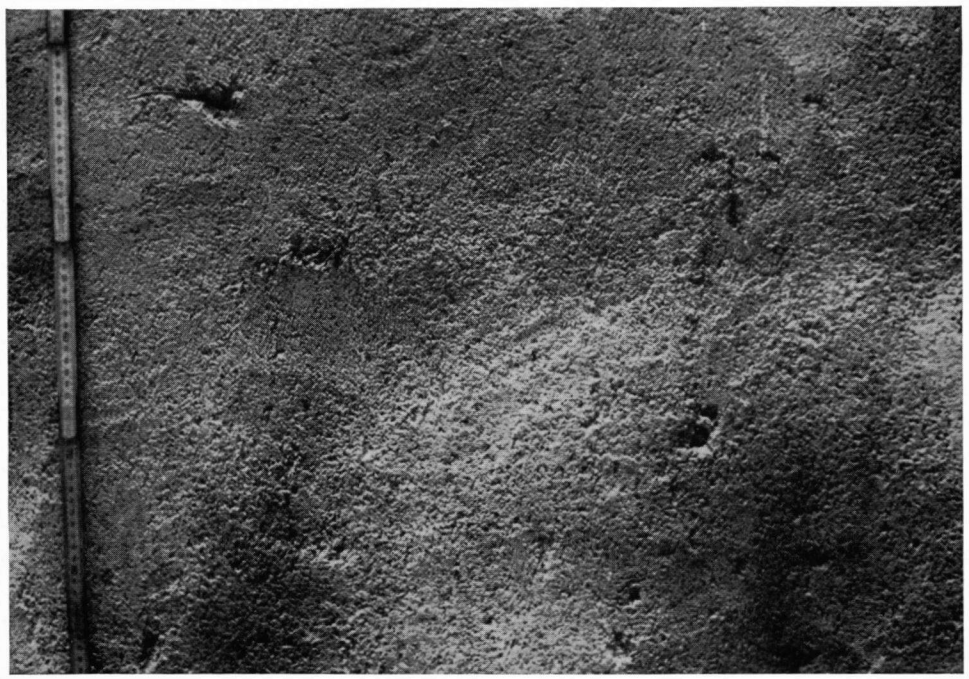
Photograph 24. The upper 70 cm of the white sand soil exposed in a pit at site 10–238. Immediately below the surface an a few centimetres thick "micropodzol" has been formed; below the latter a layer of bleached sand is found. At a depth of 10 to 20 cm the sand is rich in humus and contains a large number of strong, horizontally spreading roots (cf. photo 23). Further downwards the humus content and the number of roots decrease. The horizontal stripes are artificial; they are the result of the spading.

Photograph 25. Upper part of the undulating hardpan in the pit dug at site 10–80. The rule stands approximately vertical. The uppermost layer of the hardpan is dark brown, but towards the middle the colour passes into a lighter brown. The grooves in the hardpan have been made by the pick-axe by means of which the hardpan was exposed.

PLATE 15



Photograph 26. "Micropodzol" formed in the upper 5 cm of the white sand soil found in the open parts of the dry savanna. The thin uppermost layer, which is slightly bleached and shows a reddish hue, passes into a redbrown horizon with fine-grained illuviated material. Below the latter moderately coarse sand of a lighter colour is found (site 10–30).



Photograph 27. Wall of the pit dug at site 11–16 in the red sand; the part shown here extends from a depth of 3.3 m to a depth of 3.9 m and shows the passage of coarse red sand into still coarser white sand. In the zone of transition orange and greyish tints are seen, which penetrate as spurts into the white sand. To the left, in the red sand, the wall surface was damaged, where some roots were severed. The damaged spots in the white sand are due to the fact that pieces of quartz gravel subsided.