

プエルトリコ産 35 樹種の組織*

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The Anatomy of 35 Puerto Rican Woods*

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(Laboratory of Wood Utilization)

緒 言

日本における木材供給の約60%は、主として東南アジア産材をはじめ、北米産材、北洋産材ついでアフリカ産材などで、現在南米産材の輸入は行なわれているようであるが、アフリカ産材ほどではない。

これまで東南アジアを中心にした熱帯産材の組織構造、材質に関する情報は散在しているとはいえ、多くが公表されている。しかし、資源の枯渇に伴って輸入先が分散するようになり、利用にあたっての基礎データの不足あるいは学名すら不明のまま既知の有用樹種とともに輸入されている原木も多い。

南米産材および中南米産材についての情報はきわめて少ない。これは南米産材、中南米産材に関する文献諸情報の入手が困難であることに一因している。

近年、林ら¹⁾、木方²⁾、熱帯農業研究センター³⁾、須藤⁴⁾、高橋^{5),6)}らによって、多くの樹種についての組織構造、材質がまとめられている。

今回、これまで我国には輸入されていないプエルトリコ産35樹種のサンプルボードを入手したので、これらに関する組織構造についてとりまとめた。

カリブ海に浮ぶプエルトリコの森林にはバルサ（比重：～0.16）からリグナムバイタ（比重：1.12～）に至る広範囲にわたる比重を持っている500樹種以上の在来種がある。しかし、利用可能な用材として伐採されているのは約60種程度であり、現在輸出は皆無である。しかし、中南米、南米地域に同属、同種の樹種はかなり多い。これらの樹種の特性を活かした利用法が見出されれば、我国における中南米、南米材の有効利用の道が開けるであろう。

本報では入手したプエルトリコ産35樹種の原色写真および3断面の光学顕微鏡写真（×40）を示した。なお、各樹種のプエルトリコ以外の南米諸国における呼称、それぞれの樹種の材質、特性および既知の利用法などは次報にゆずる。これらのサンプル材は Dr. M. Chudnoff 氏 (Institute of Tropical Forestry, Research Project Leader, Puerto Rico, U. S. D. A) より寄贈を受けた。その御好意に対してここに謝意を表する。また、本資料に対して貴重な紙面をさいて載いた鹿児島大学農学部附属演習林に対して謝意を表する次第である。

参 考 文 献

- 1) 林 昭三・角田邦夫・西本孝一：熱帯材の組織と材質（資料Ⅰ ブラジル産30樹種の組織）. 木材研究資料 第10号, 42～70(1976)；（同資料Ⅱ ガーナ産11樹種の組織）. 木材研究資料 第11号, 48～61(1977)；（同資料Ⅲ アルゼンチン産10樹種の組織）. 木材研究資料 第12号, 29～40(1980)

* 本報を「輸入木材の性質（第10報）」とする。

- 2) 木方洋二：アフリカの木材（その1）．熱帯林業，No. 57, 8-16 (1980); 同（その2），No. 58, 8-15 (1980)
- 3) 農林省熱帯農業研究センター：熱帯の有用樹種，熱帯林業協会．（東京）(1978)．
- 4) 須藤彰司：熱帯材の識別．林試研報．第157号．1-262 (1963)
- 5) 高橋 徹：外国産木材の強度データ集（Ⅱ．中南米）．輸入木材研究報告．No. 4 (1975)
- 6) 高橋 徹：外国産木材の強度データ集（Ⅲ．アフリカ）．輸入木材研究報告．No. 7. (1978)

Summary

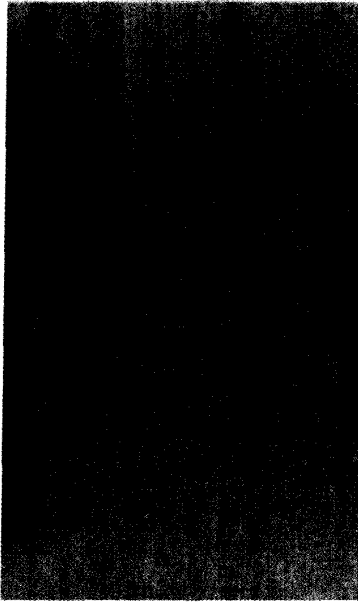
More than 500 species of tree are indigenous to the forests of Puerto Rico, ranging from balsa, which produces the lightest commercial wood known, to *lignumvitae*, one of the heaviest and one of the most valuable of all woods. Most of the native woods are available only in limited quantities and none are sufficiently abundant for export. In this report, Puerto Rican woods including 21 families, 34 genera and 35 species have been observed macroscopically and microscopically. Vernacular or common names and botanical names are listed for each species in Table 1. And microphotographs of three structural sections of each wood species and photographs of tangential surfaces of the samples are given in this paper.

In preparing this paper, the author would like to express his appreciation to Dr. M. Chudnoff, Research Project Leader, Forest Products Utilization, Forest Service, Institute of Tropical Forestry, U.S.D.A., U.S.A., for providing the valuable wood samples.

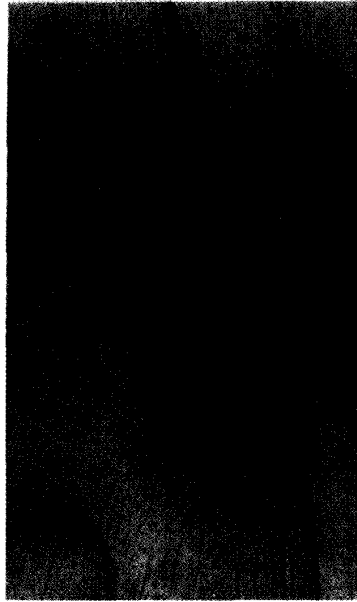
Table 1. List of vernacular and common names in Puerto Rico and botanical names

	Common name in PUERTO RICO	Botanical Name	Family
1.	Aguacatillo	<i>Meliosma herbertii</i> Rolfe	SABIACEAE
2.	Algarrobo	<i>Hymenaea courbaril</i> L.	LEGUMINOSAE
3.	Almácigo	<i>Bursera simaruba</i> (L.) Sarg.	BURSERACEAE
4.	Ausubo	<i>Manilkara bidentata</i> (A. Dc) Chev.	SAPOTACEAE
5.	Balsa	<i>Ochroma lagopus</i> Sw.	BOMBACACEAE
6.	Cadám	<i>Anthocephalus cadamba</i> Miq.	RUBIACEAE
7.	Caimitillo	<i>Micropholis chrysophylloides</i> Pierre.	SAPOTACEAE
8.	Caimitillo verde	<i>Micropholis garciniaeaolia</i> Pierre	SAPOTACEAE
9.	Caoba hodurena	<i>Swietenia macrophylla</i> King	MELIACEAE
10.	Capá blanco	<i>Petitia domingensis</i> Jacq.	VERBENACEAE
11.	Caracolillo	<i>Homalium racemosum</i> Jacq.	SAMYDACEAE
12.	Espino rubial	<i>Zanthoxylum martinisense</i> (Lamb.) DC.	RUTACEAE
13.	Eucalyptus	<i>Eucalyptus robusta</i> J. E. Smith	MYRTACEAE
14.	Gedro hembra	<i>Cedrela odorata</i> L.	MELIACEAE
15.	Granadillo	<i>Buchenavia capitata</i> (Vahl.) Eichl.	COMBRETACEAE
16.	Guaba	<i>Inga vera</i> Willd.	LEGUMINOSAE
17.	Guajón	<i>Beischmiedia Pendula</i> (Sw.) Benth & Hook, f.	LAURACEAE
18.	Guanacaste	<i>Enterlobium cyclocarbum</i> Gris.?	LEGUMINOSAE
19.	Guaraguo	<i>Guarea trichilioides</i> L.	MELIACEAE
20.	Jaguey	<i>Ficus laevigata</i> Vahl.	MORACEAE
21.	Laurel amarillo	<i>Nectandra sintensii</i> Mez.	LAURACEAE
22.	Laurel geo	<i>Ocotea leucoxylon</i> (Sw.) Masa	LAURACEAE
23.	Laurel sabino	<i>Magnolia splendens</i> Urban	MAGNOKIACEAE
24.	Maga	<i>Montezuma speciosissima</i> Sesseb Moc.	HERNANDIACEAE
25.	Mahoe	<i>Hibislus elatus</i> Sw.	MALVACEAE
26.	Manzana malaya	<i>Eugenia malaccensis</i> L.	MYRTACEAE
27.	Maricao	<i>Byrosonia coriaceum</i> (Sw.) DC.	MALPIGHIACEAE
28.	Moca	<i>Andira inermis</i> (W. Wright) H.B.K.	LEGUMINEOSAE
29.	María	<i>Calophyllum brasiliense</i> Camb.	GUTTIFERAE
30.	Neuz moscada	<i>Ocotea moshata</i> (Meissm) Mez.	LAURACEAE
31.	Palo de matos	<i>Ormosia krugii</i> Urban	LEGUMINOSAE
32.	Roble	<i>Tabebuia heterophylla</i> (DC.) Britton	BIGNONIACEAE
33.	Tabonuco	<i>Dacryodes excelsa</i> Vahl.	BURSERACEAE
34.	Tulipán africano	<i>Spathodea campanulata</i> Beaov.	BIGNONIACEAE
35.	Ucar	<i>Bucida buceras</i> L.	COMBRETACEAE

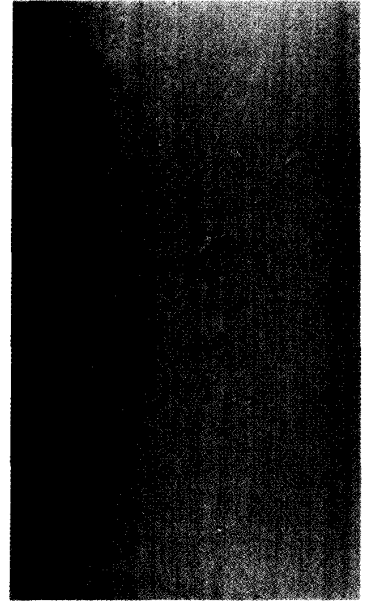
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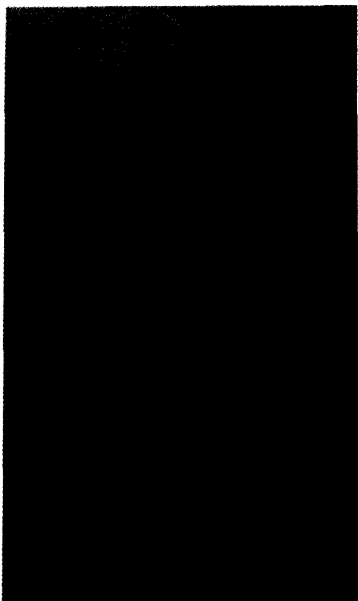
2. Algarrobo

Hyemnaea courbaril L.

3. Almacigo

Bursera simaruba (L.) Sarg.

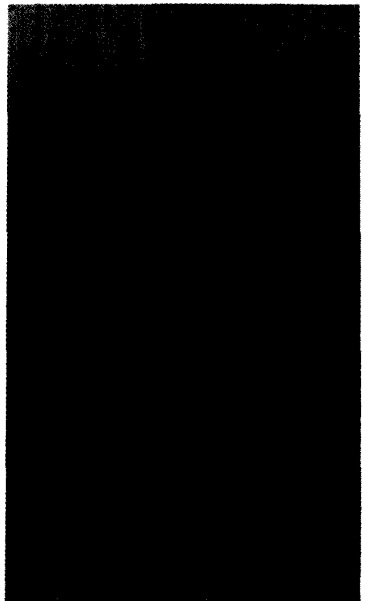
4. Ausubo

Manilkara bidentata (A. Dc) Chev.

5. Balsa

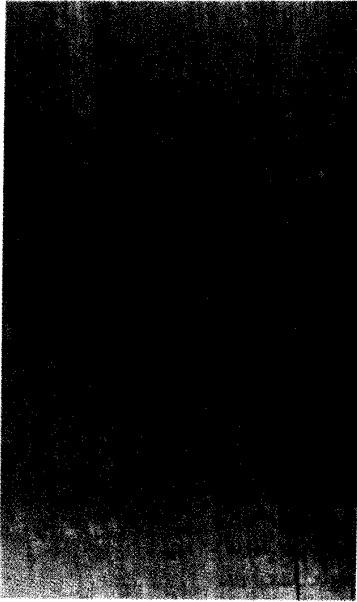
Ochroma lagopus Sw.

6. Cadám

Anthocephalus cadamba Miq.

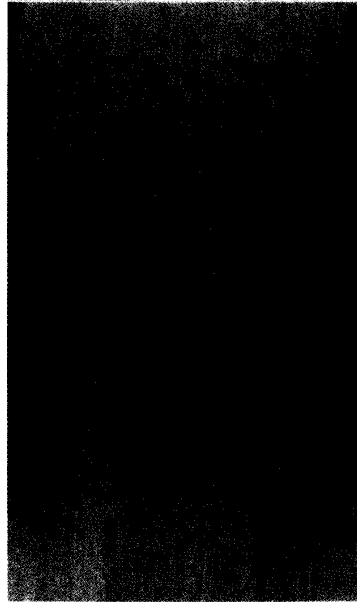
7. Caimitillo

Micropholis chrysophylloides Pierre.



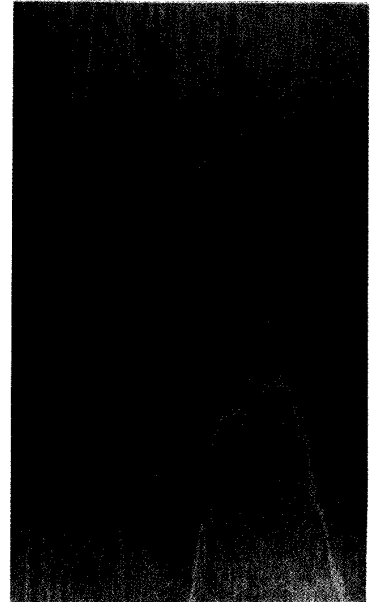
8. Caimitillo verde

Micropholis garciniaeolia Pierre



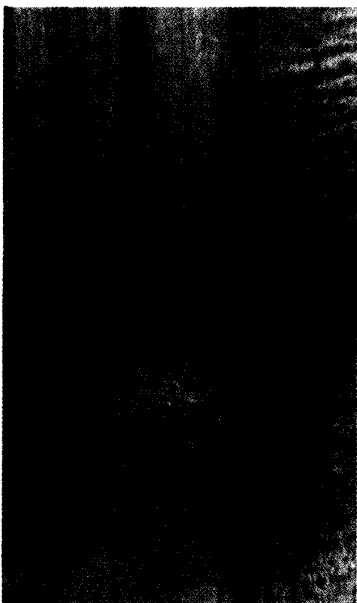
9. Caoba hodurena

Swietenia macrophylla King



10. Capá blanco

Petitia domingensis Jacq.



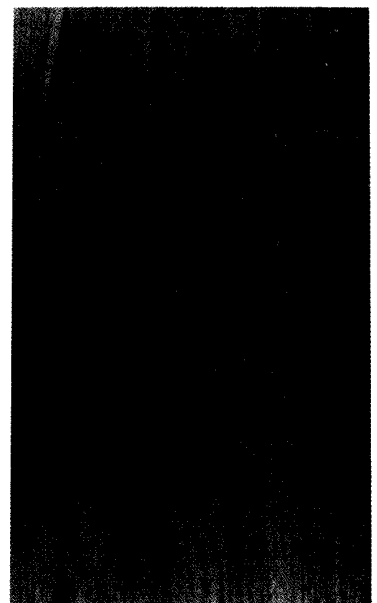
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Homalium racemosum Jacq.

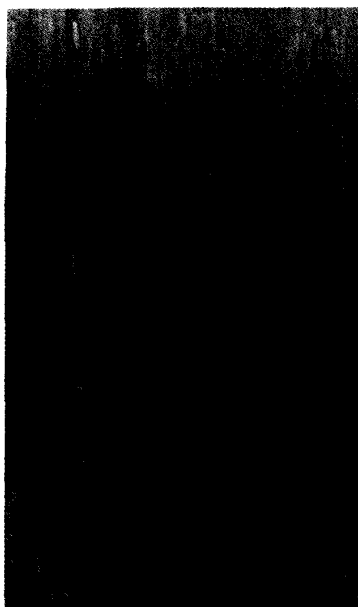


12. Espino rubial

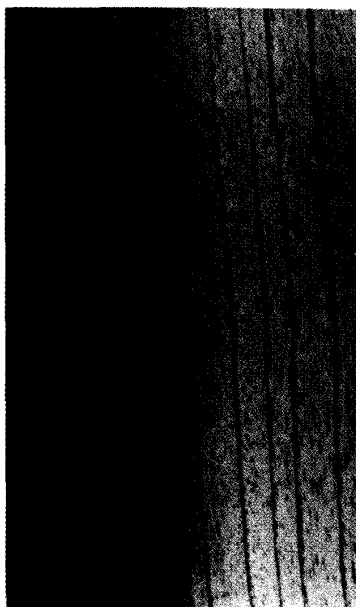
Zanthoxylum martinisense (Lamb.)
DC.



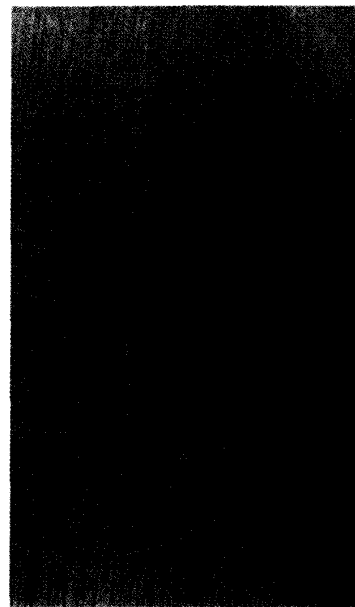
13. Eucalyptus

Eucalyptus robusta J. E. Smith

14. Gedro hembra

Cedrela odorata L.

15. Granadillo

Buchenavia capitata (Vahl.). Eichl.

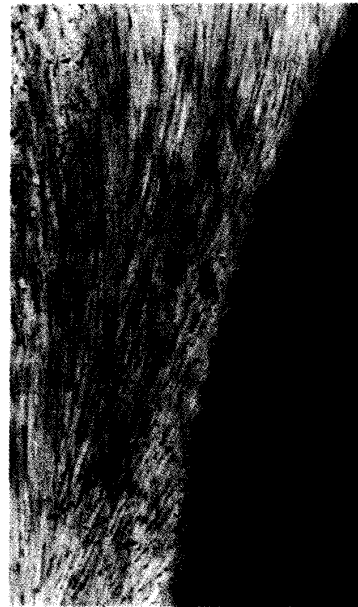
16. Guaba

Inga vera Willd.

17. Guajón

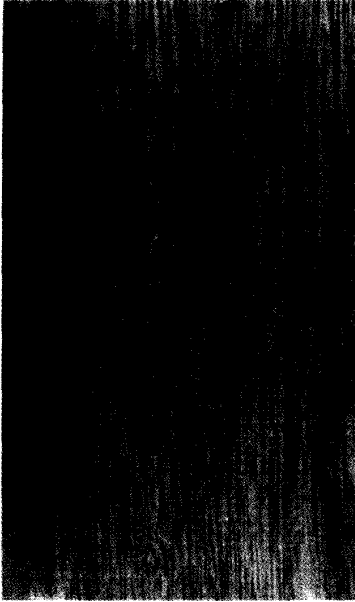
Beilschmiedia Pendula (Sw.)
Benth & Hook, f.

18. Guanacaste

Enterlobium cyclocarbum Gris.?

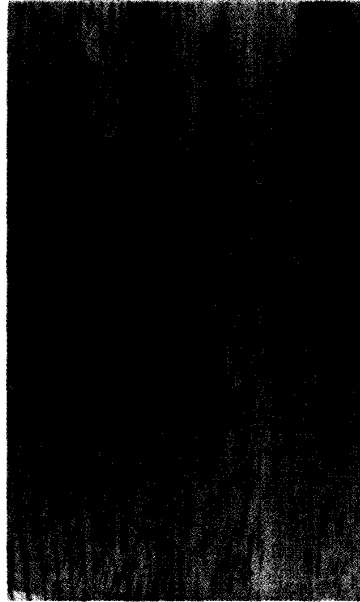
19. Guaraguao

Guarea trichilioides L.



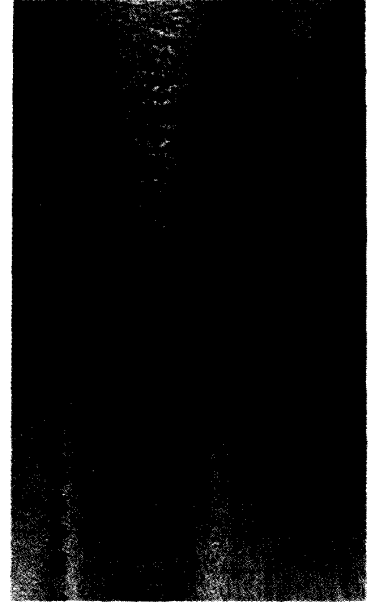
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Ficus laevigata Vahl.



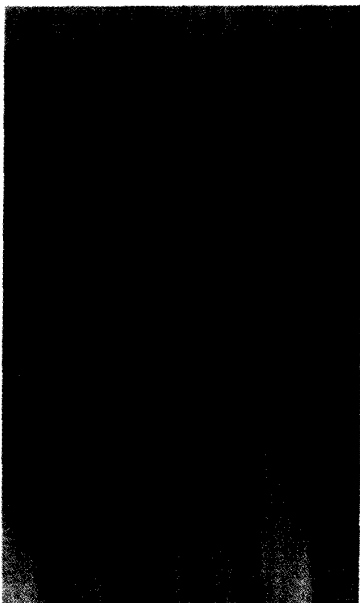
21. Laurel amarillo

Nectandra sintensii Mez.



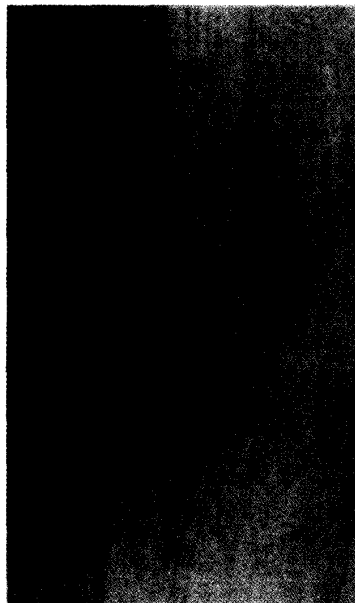
22. Laurel geo

Ocotea leucoxylon (Sw.) Masa



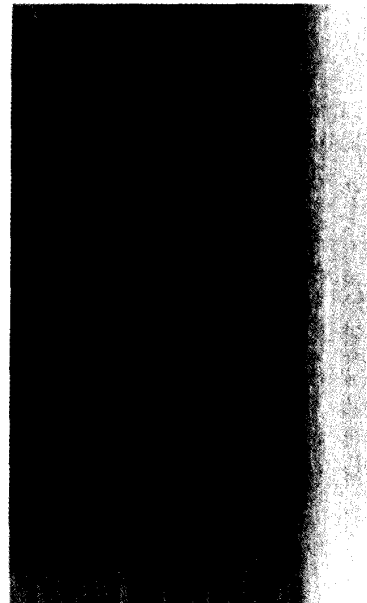
23. Laurel sabino

Magnolia splendens Urban



24. Maga

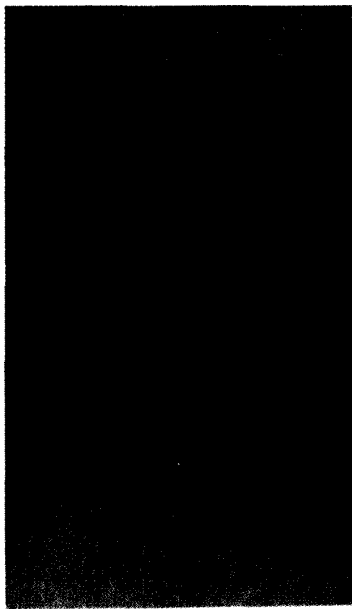
Montezuma speciosissima Sessebs Moc.



25. Mahoe

Hibisus elastus Sw.

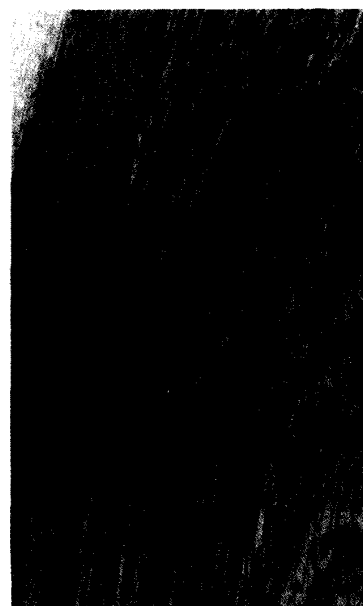
26. Manzana malaya

Eugenia malaccensis L.

27. Maricao

Byrosonia coriaceum (Sw.) DC.

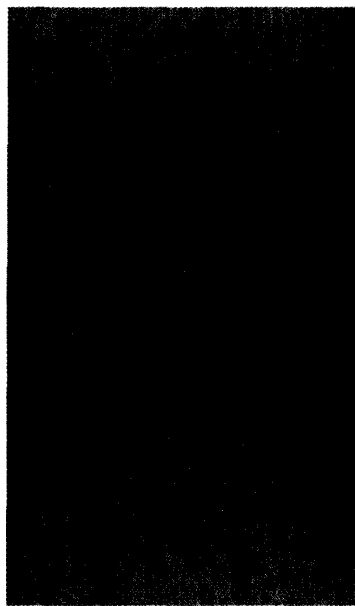
28. Moca

Andira inermis (W. Wright) H.B.K.

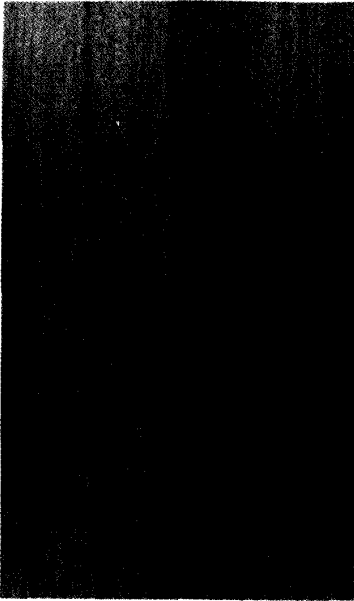
29. María

Calophyllum brasiliense Camb.

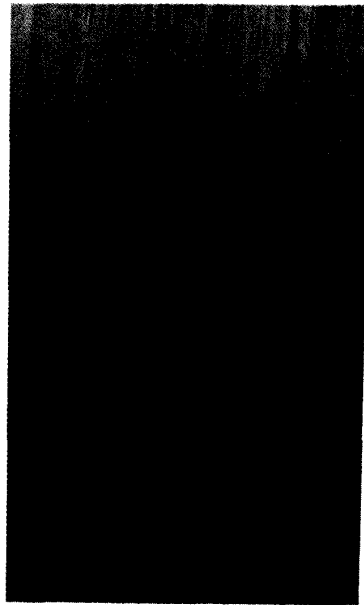
30. Neuz moscada

Ocotea moshata (Meissm) Mez.

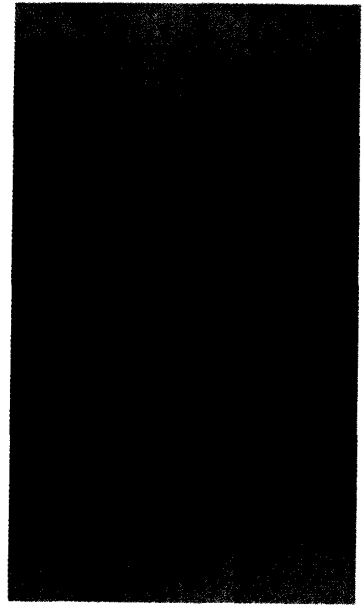
31. Palo de matos
Ormosia krugii Urban



32. Roble
Tabebuia heterophylla (DC.) Britton



33. Tabonuco
Dacryodes excelsa Vahl.



34. Tulipán africano
Spathodea campanulata Beaov.

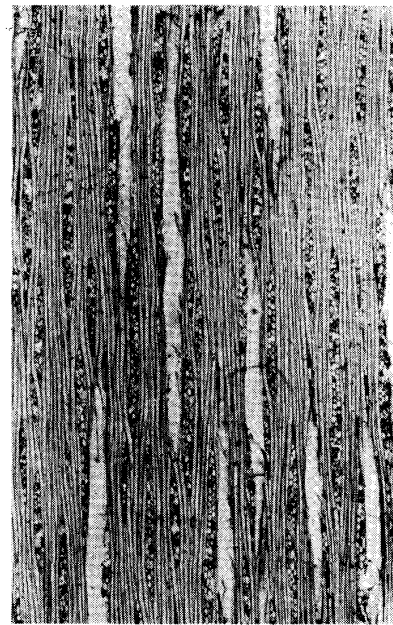
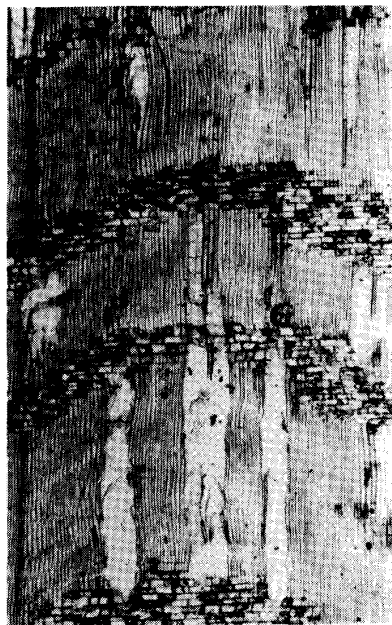
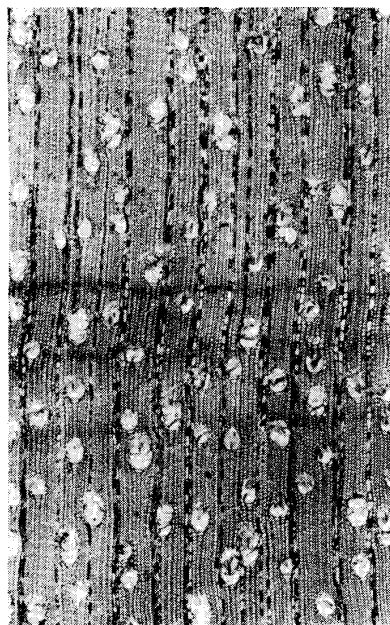


35. Ucar
Bucida buceras L.



1. *Meliosma herbertii* Rolfe
Aguacatillo

SABIACEAE



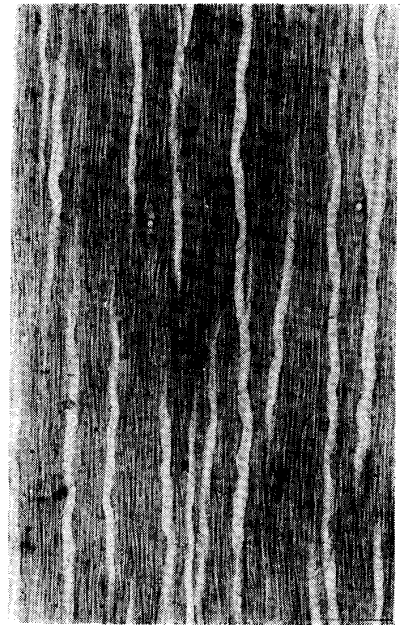
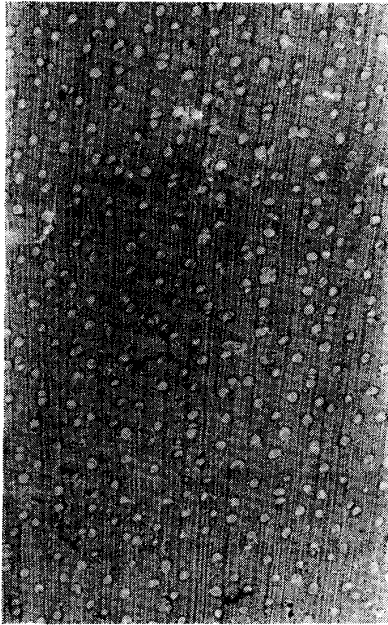
2. *Hymenaea courbaril* L.
Algarrobo

LEGUMINOSAE



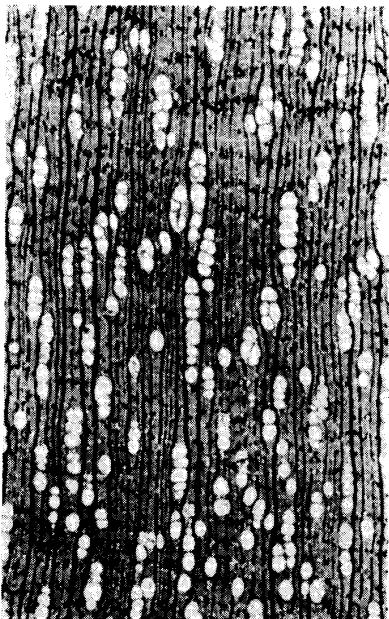
3. *Bursera simaruba* (L.) Sarg.
Almácigo

BURSERACEAE



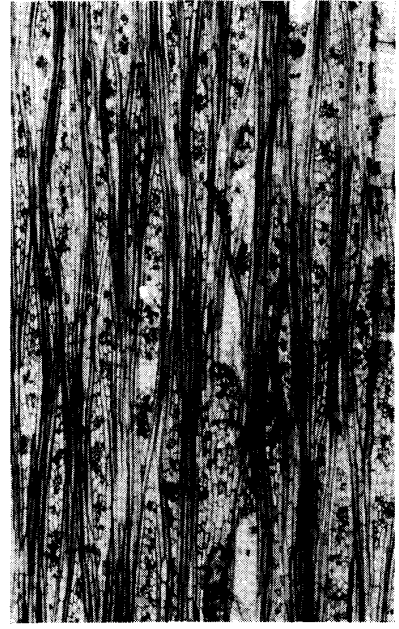
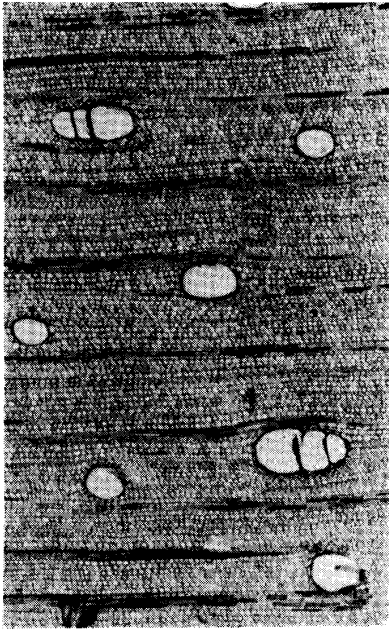
4. *Manilkara bidentata* (A. Dc) Chev.
Ausubo

SAPOTACEAE



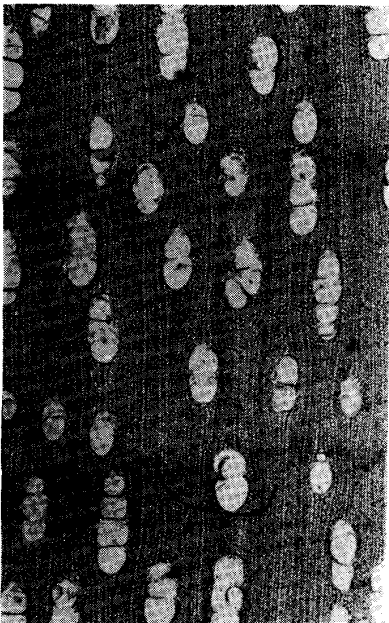
5. *Ochroma lagopus* Sw.
Balsa

BOMBACACEAE



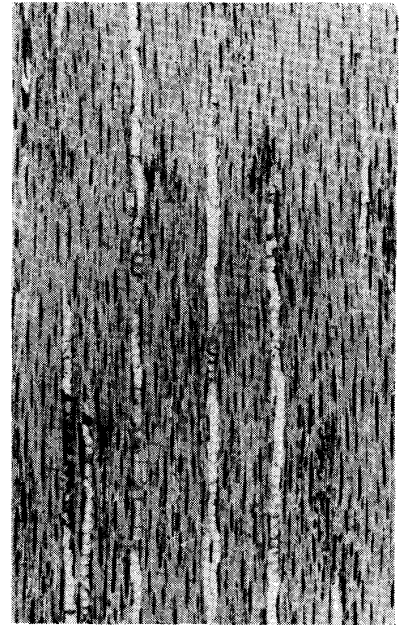
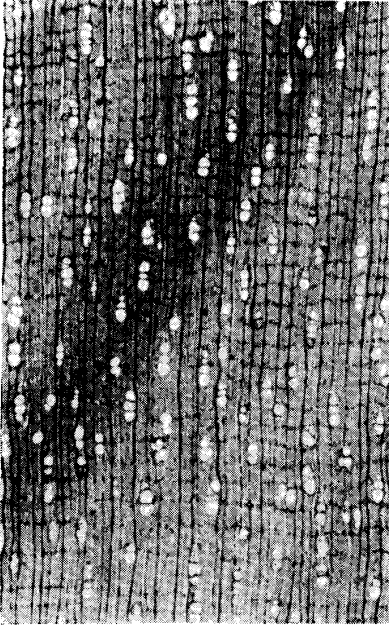
6. *Anthocephalus cadamba* Miq.
Cadám

RUBIACEAE



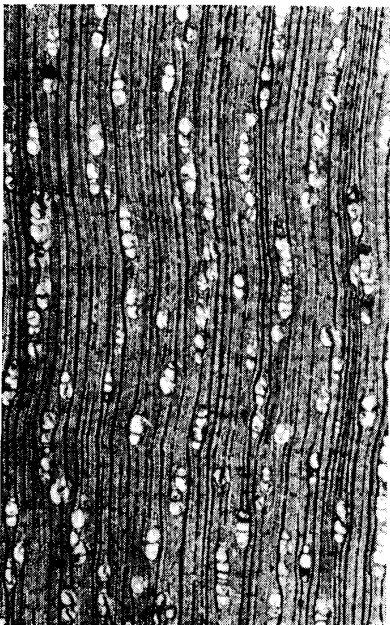
7. *Micropholis chrysophylloides* Pierre.
Caimitillo

SAPOTACEAE



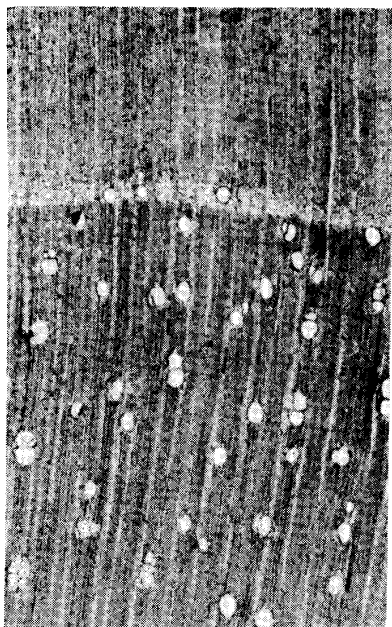
8. *Micropholis garciniaeolia* Pierre
Caimitillo verde

SAPOTACEAE



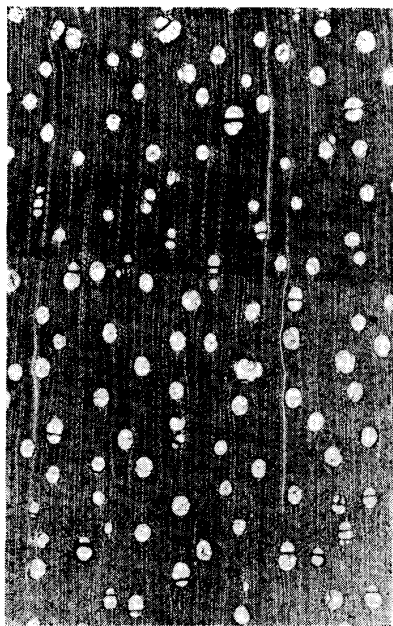
9. *Swietenia macrophylla* King
Caoba hodurena

MELIACEAE



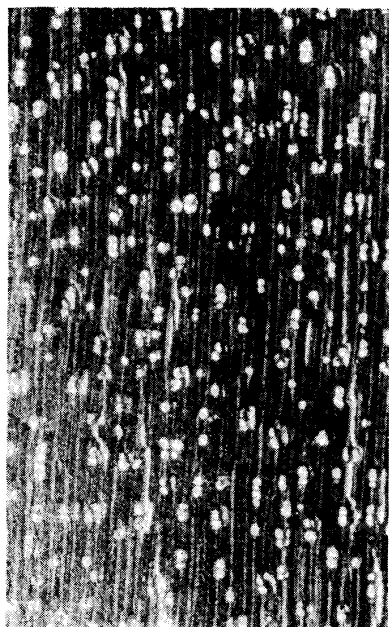
10. *Petitia domingensis* Jacq.
Capá blanco

VERBENACEAE



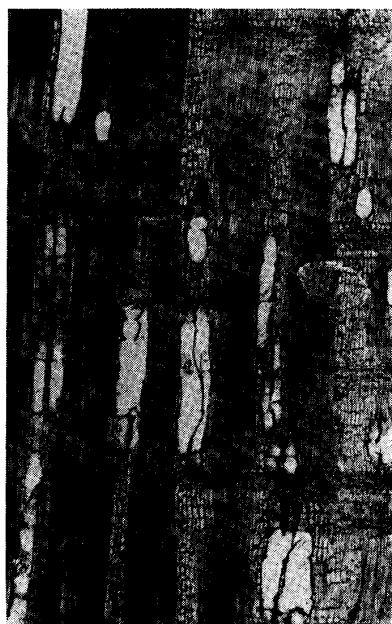
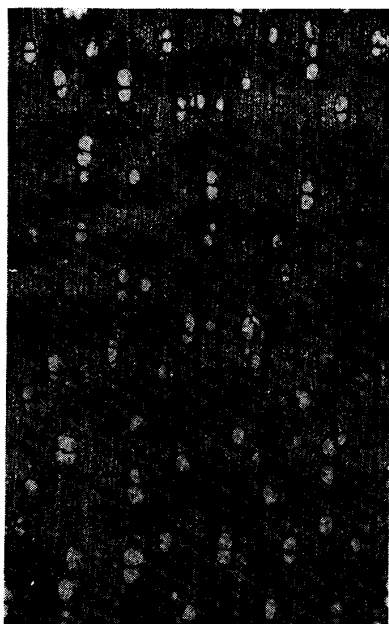
11. *Homalium racemosum* Jacq.
Caracolillo

SAMYDACEAE



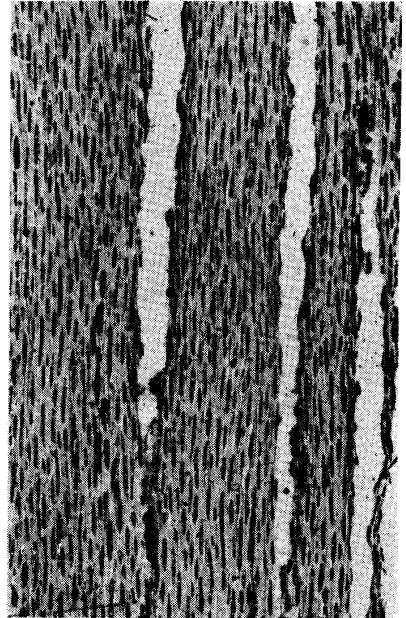
12. *Zanthoxylum martinisense* (Lamb.) DC.
Espino rubial

RUTACEAE



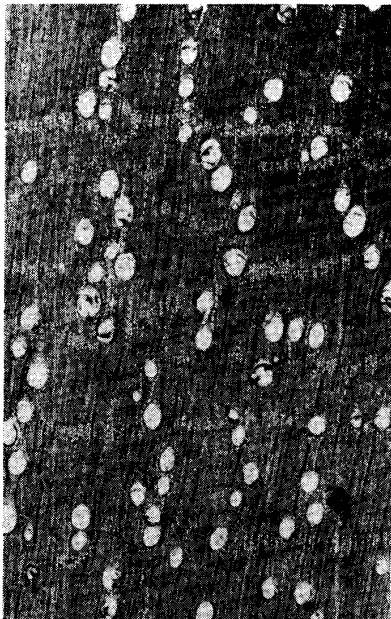
13. *Eucalyptus robusta* J. E. Smith
Eucalyptus

MYRTACEAE



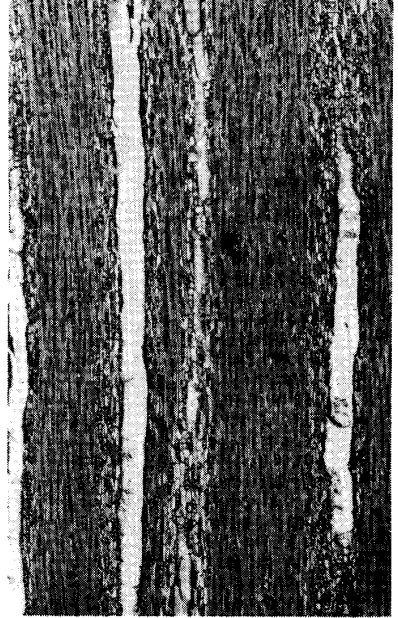
14. *Cedrela odorata* L.
Gedro hembra

MELIACEAE



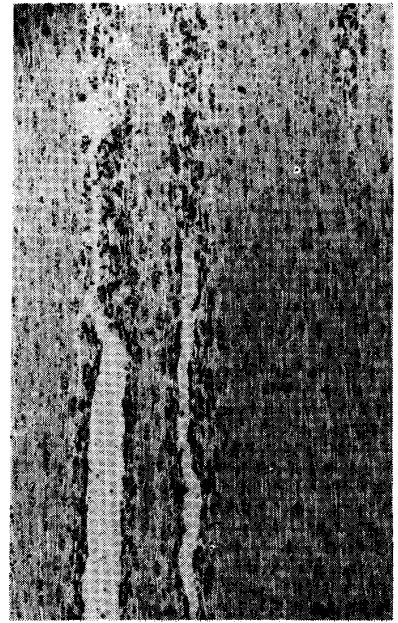
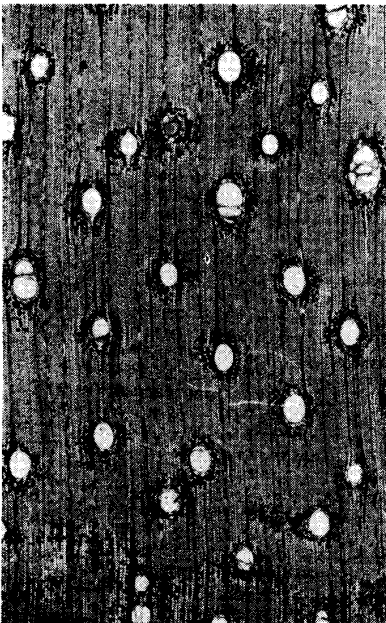
15. *Buchenavia capitata* (Vahl.) Eichl.
Granadillo

COMBRETACEAE



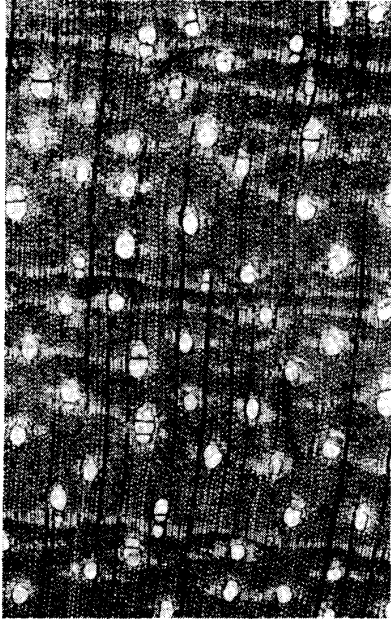
16. *Inga vera* Willd.
Guaba

LEGUMINOSAE



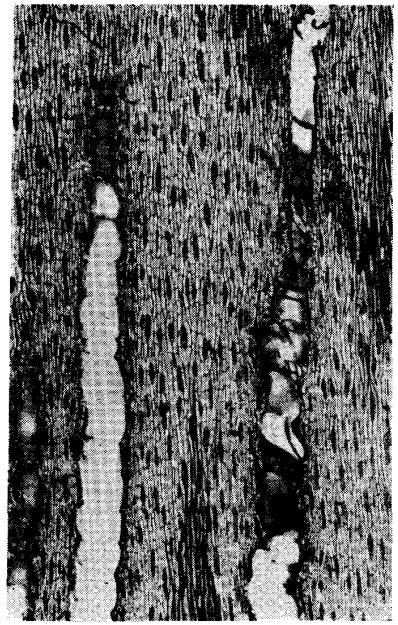
17. *Beilschmiedia Pendula* (Sw.) Benth & Hook, f.
Guajón

LAURACEAE



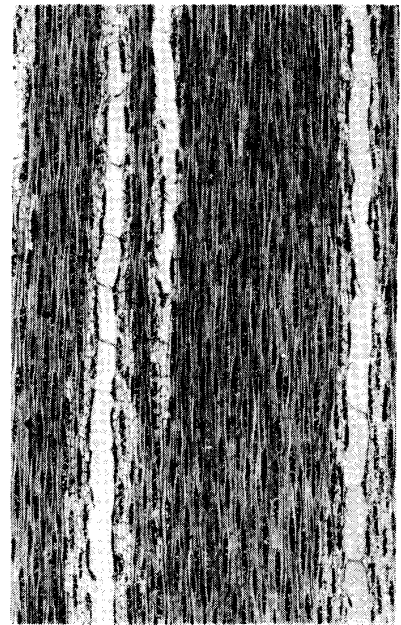
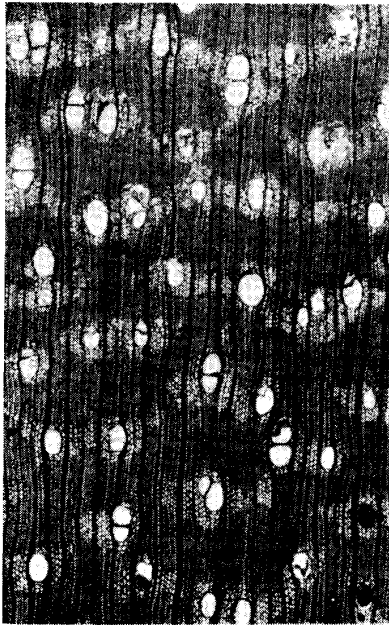
18. *Enterlobium cyclocarbum* Gris.?
Guanacaste

LEGUMINOSAE



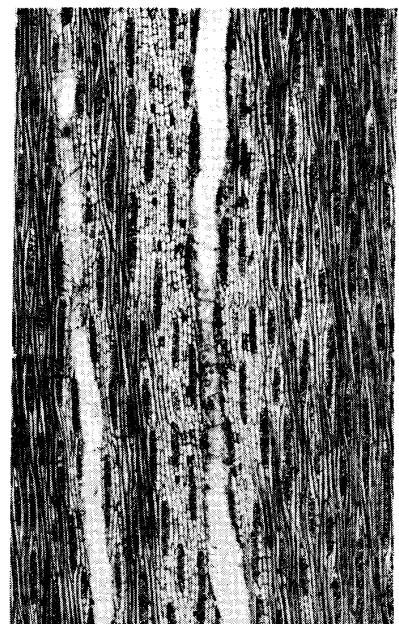
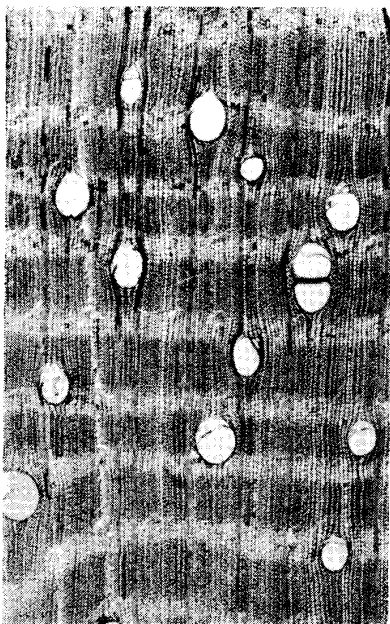
19. *Guarea trichilioides* L.
Guaraguao

MELIACEAE



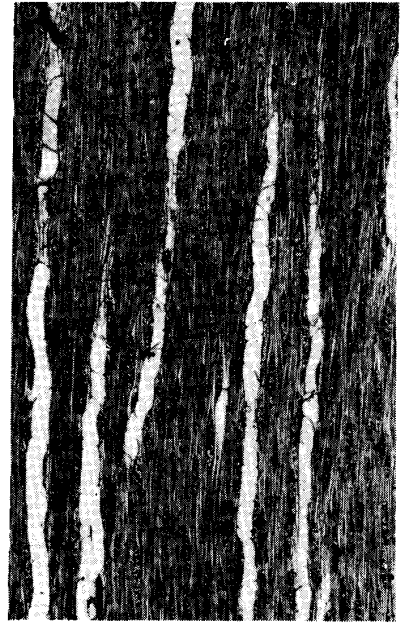
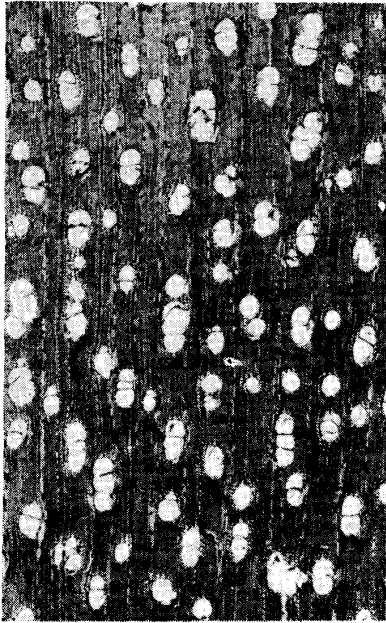
20. *Ficus laevigata* Vahl.
Jaguey

MORACEAE



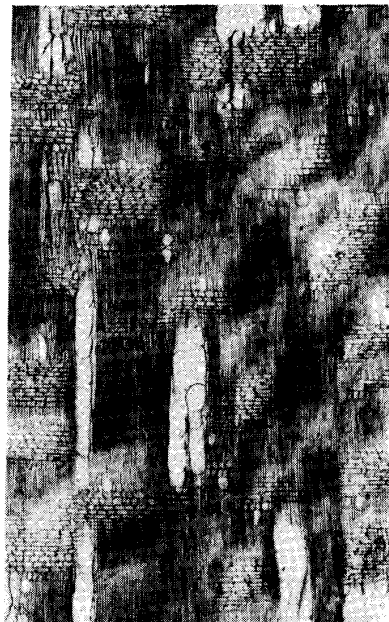
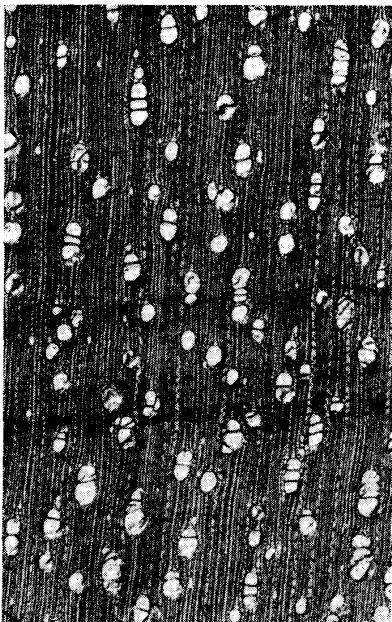
21. *Nectandra sintensii* Mez.
Laurel amarillo

LAURACEAE



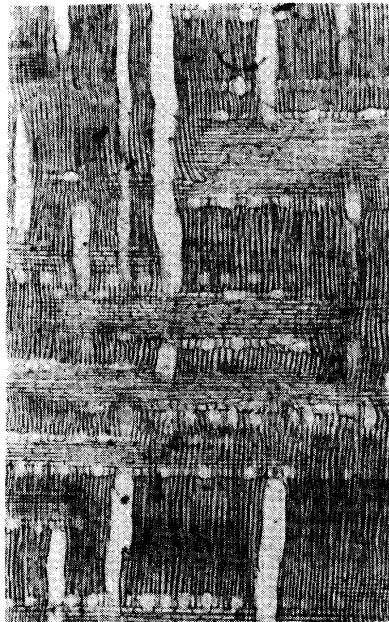
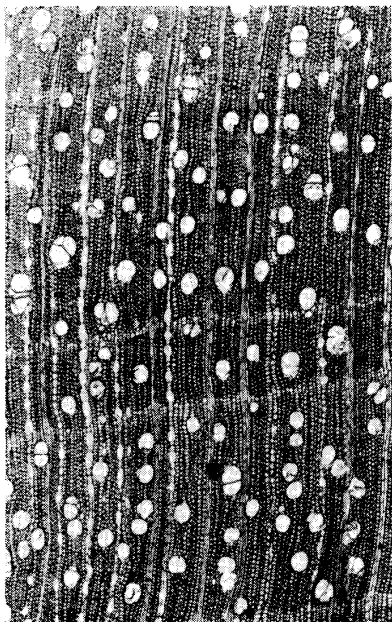
22. *Ocotea leucoxylon* (Sw.) Masa
Laurel geo

LAURACEAE



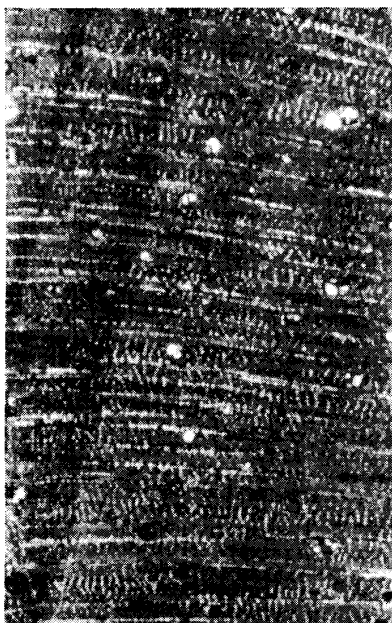
23. *Magnolia splendens* Urban
Laurel sabino

MAGNOKIACEAE



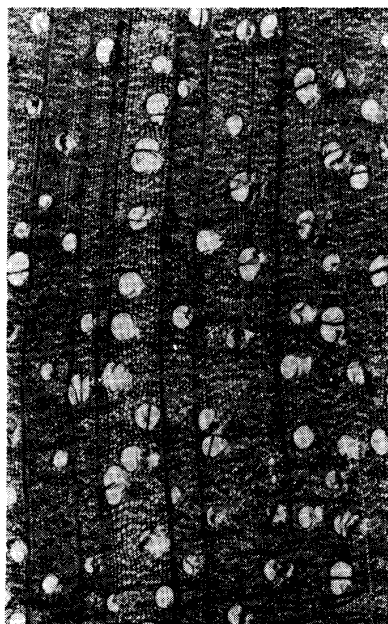
24. *Montezuma speciosissima* Sesseb Moc.
Maga

HERNANDIACEAE



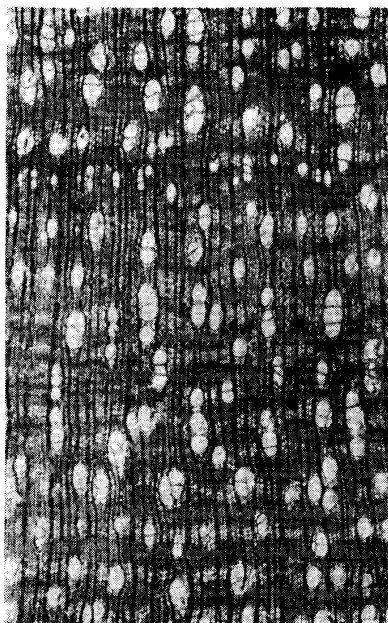
25. *Hibislus elastus* Sw.
Mahoe

MALVACEAE



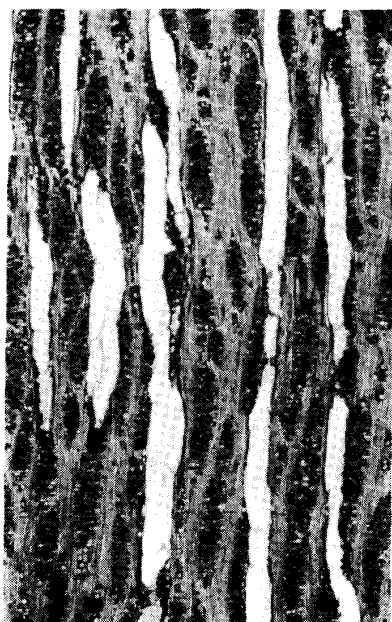
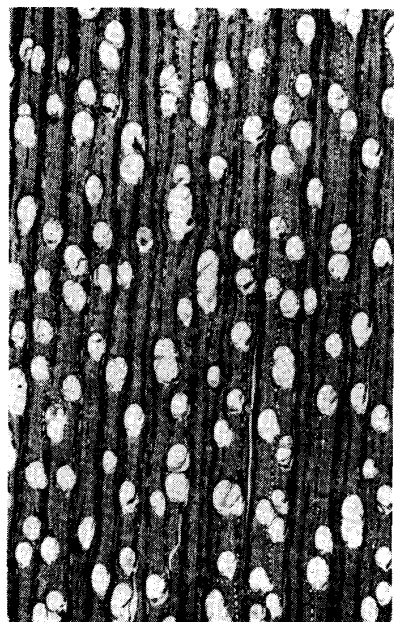
26. *Eugenia malaccensis* L.
Manzana malaya

MYRTACEAE



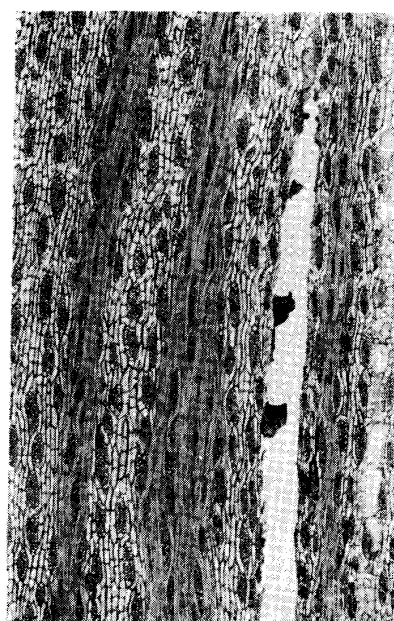
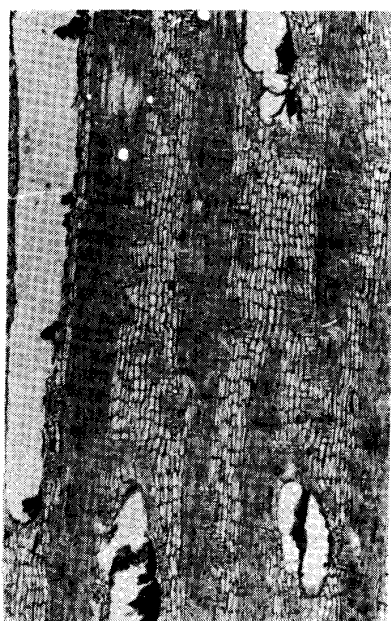
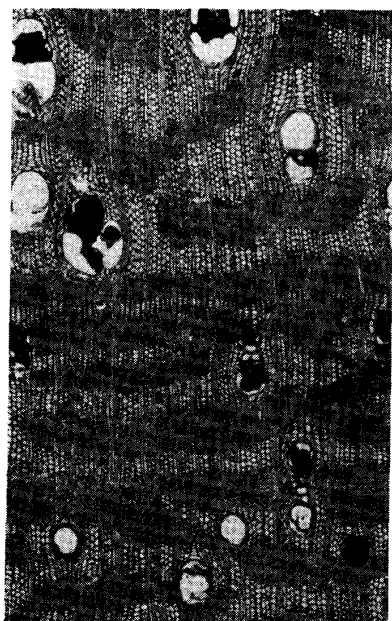
27. *Byrosnia coriaceum* (Sw.) DC.
Maricao

MALPIGHIACEAE



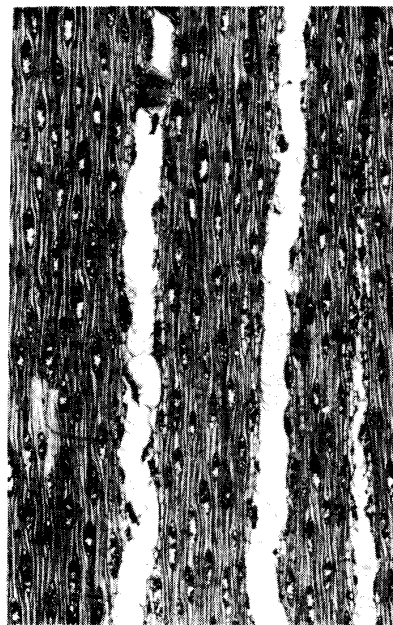
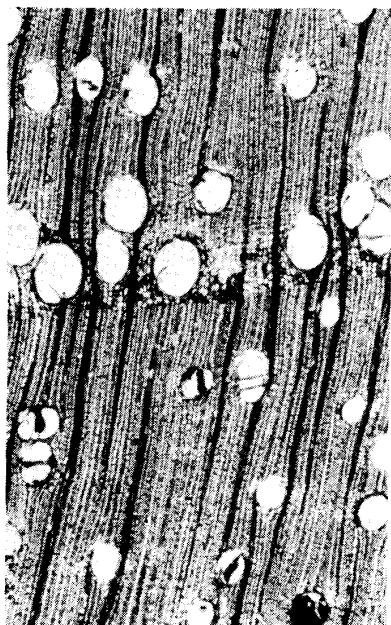
28. *Andira inermis* (W. Wright) H.B.K.
Moca

LEGUMINEOSAE



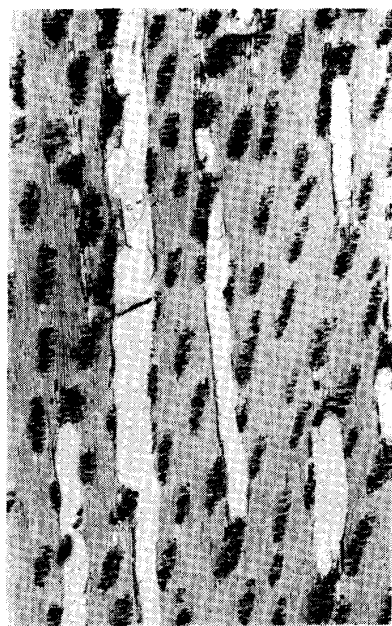
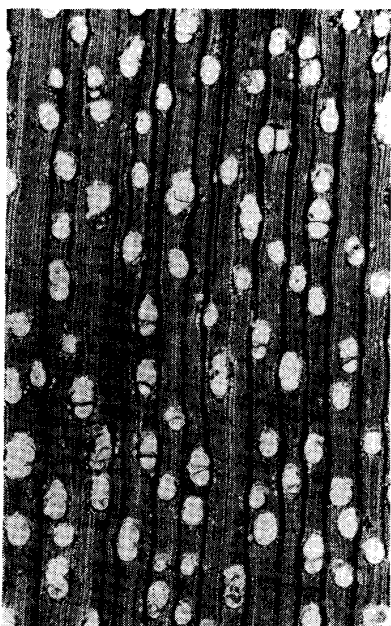
29. *Calophyllum brasiliense* Camb.
Maria

GUTTIFERAE



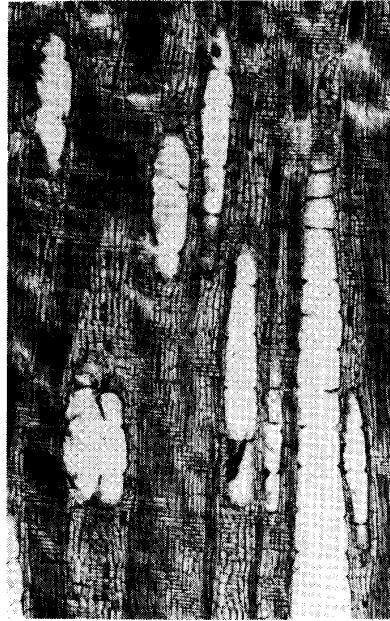
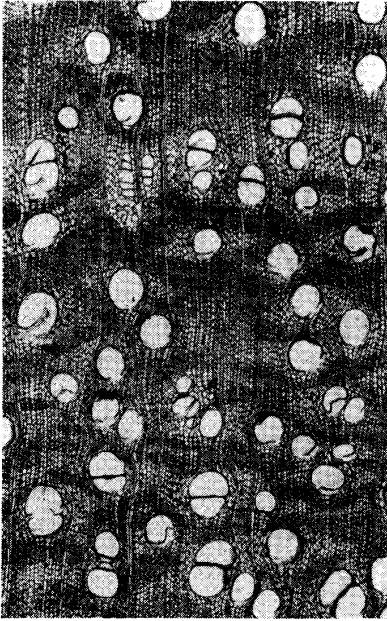
30. *Ocotea moshata* (Meissm) Mez.
Neuz moscada

LAURACEAE



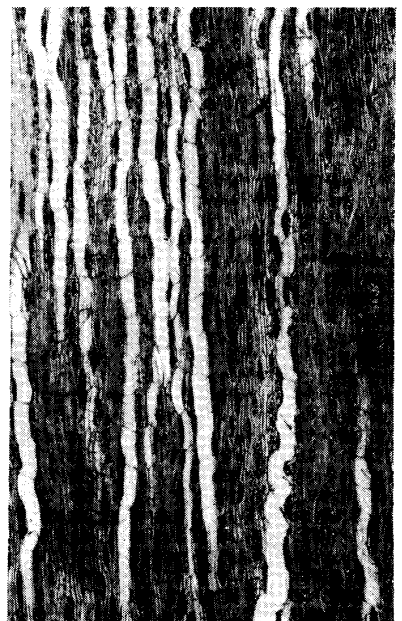
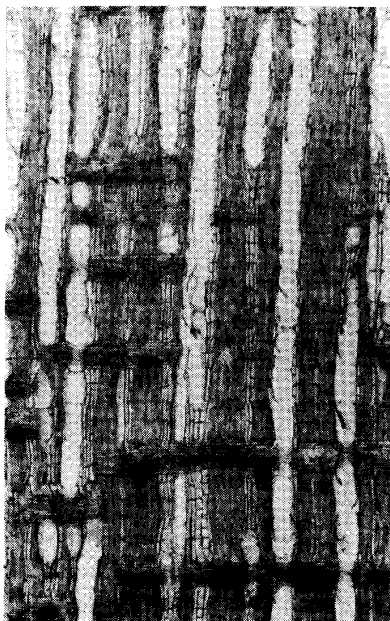
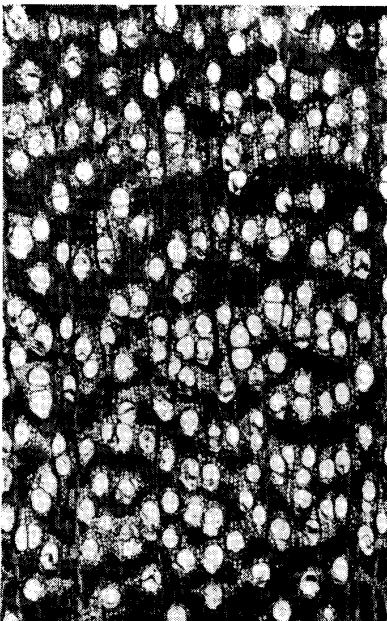
31. *Ormosia krugii* Urban
Palo de matos

LEGUMINOSAE



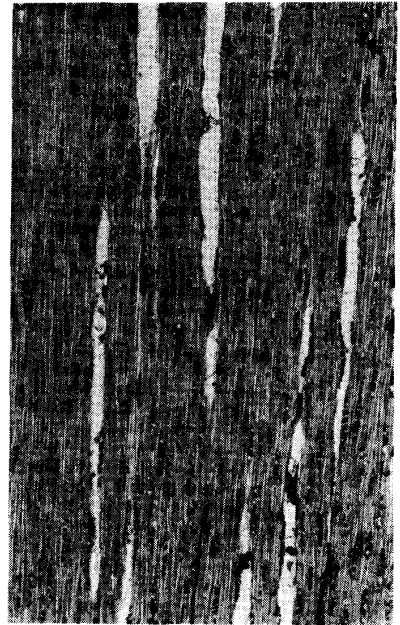
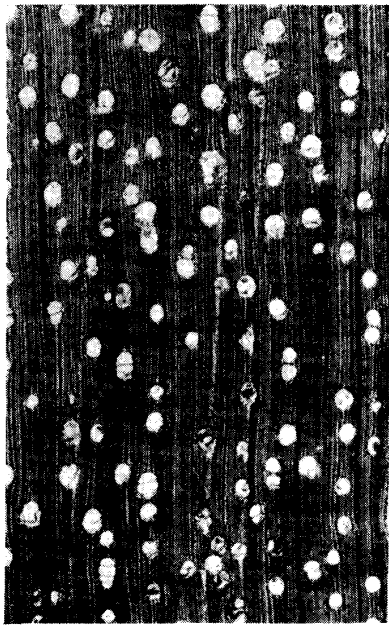
32. *Tabebuia heterophylla* (DC.) Britton
Roble

BIGNONIACEAE



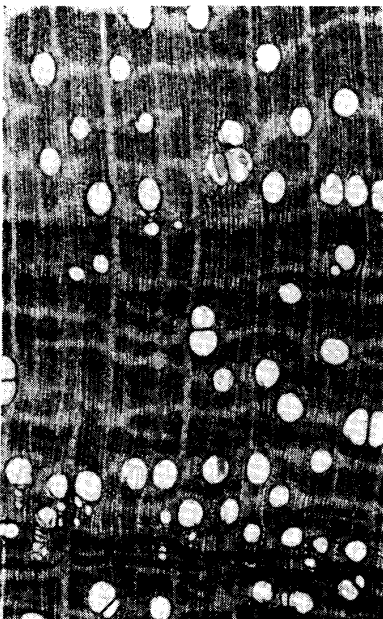
33. *Dacryodes excelsa* Vahl.
Tabonuco

BURSERACEAE



34. *Spathodea campanulata* Beaov.
Tulipán africano

BIGNONIACEAE



35. *Bucida buceras* L.
Ucar

COMBRETACEAE

