

Identification of Central American *Dalbergia*

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Central American Commercial Species

	<u>Belize</u>	<u>Guat</u>	<u>Hond</u>	<u>Salv</u>	<u>Nic</u>	<u>CR</u>	<u>Pan</u>
<i>D. retusa</i>		X	X	X	X	X	X
<i>D. calycina</i>	X	X	X	X	X	X	
<i>D. tucurensis</i>	X	X	X	X	X	X	
<i>D. congestiflora</i>		X		X			
<i>D. funera</i>	X	X	X	X	X		
<i>D. stevensonii</i>	X	X	X				

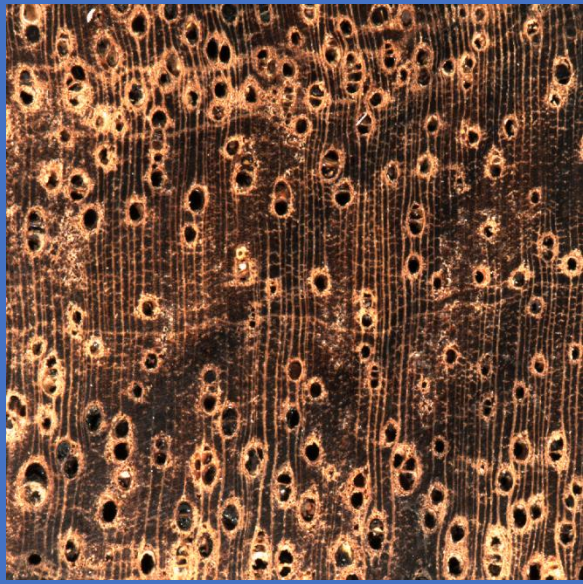
Synonyms:

D. calycina = *D. intibucana*

D. funera = *D. calderonii*

D. retusa = *D. cuscatlanica*, *D. granadillo*, *D. hypoleuca*, *D. lineata*, *D. pacifica*

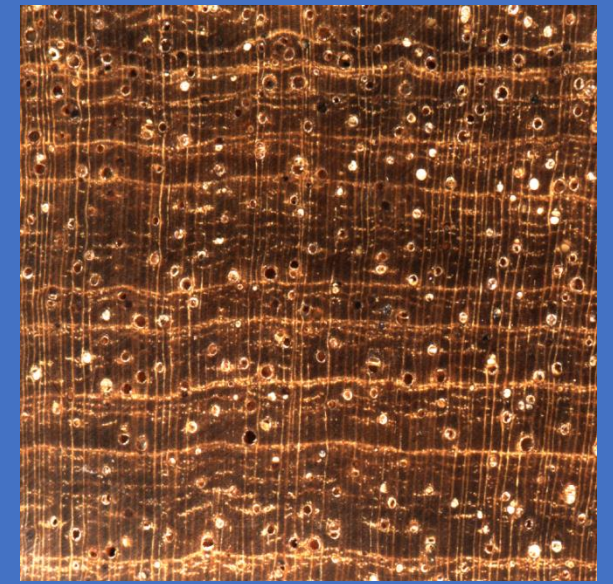
D. tucurensis = *D. cubilquitzensis*, *D. glomerata*



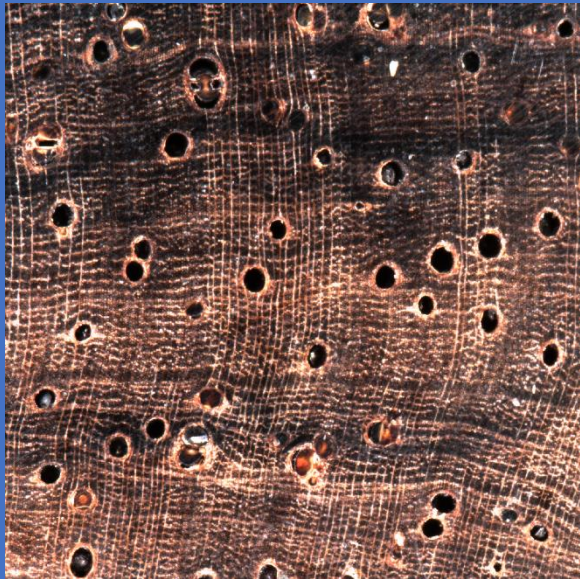
Dalbergia calycina



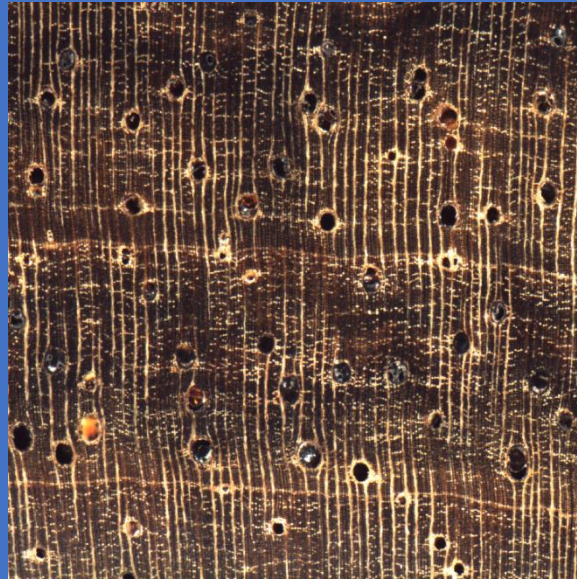
Dalbergia congestiflora



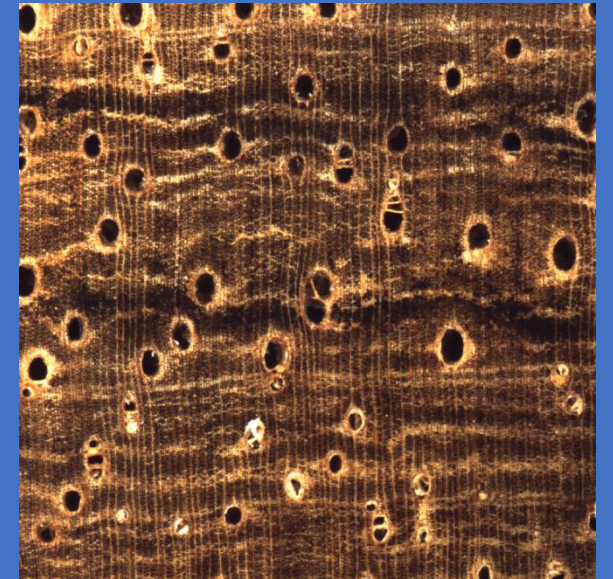
Dalbergia funera



Dalbergia retusa

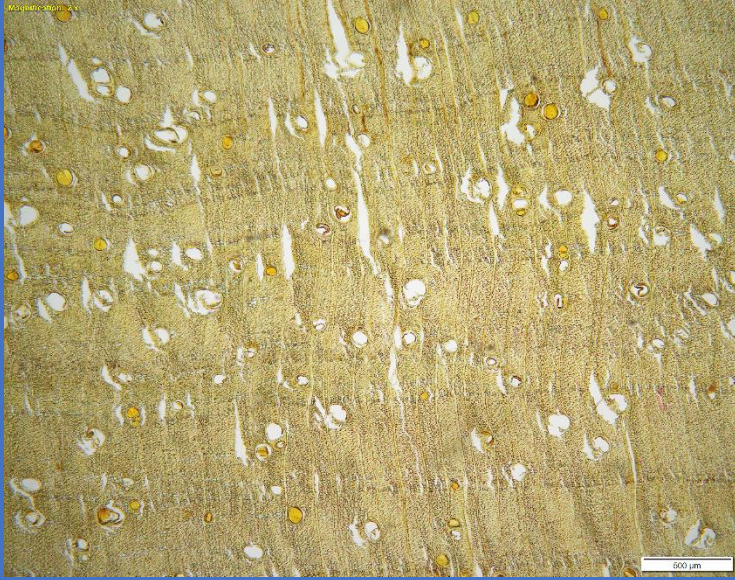


Dalbergia stevensonii



Dalbergia tucurensis

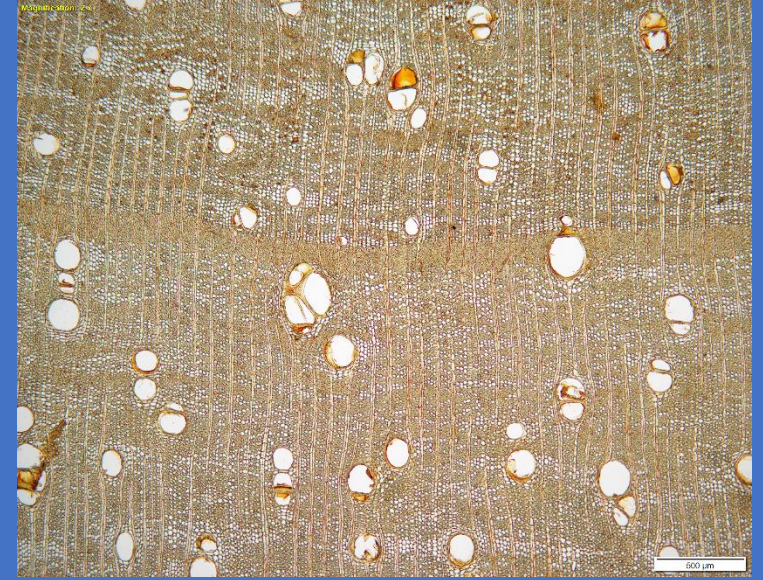
Pore Diameter



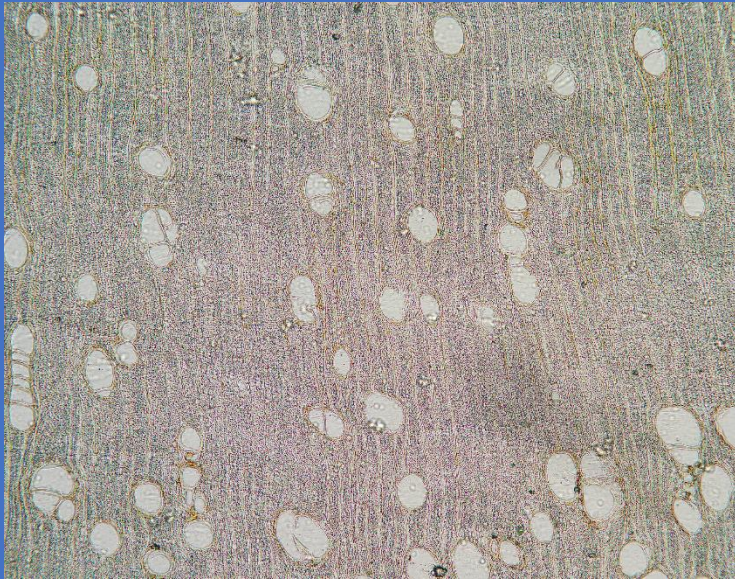
D. funera 40–130 μm



D. congestiflora 70–160 μm



D. tucurensis 90–210 μm



D. calycina 90–270 μm

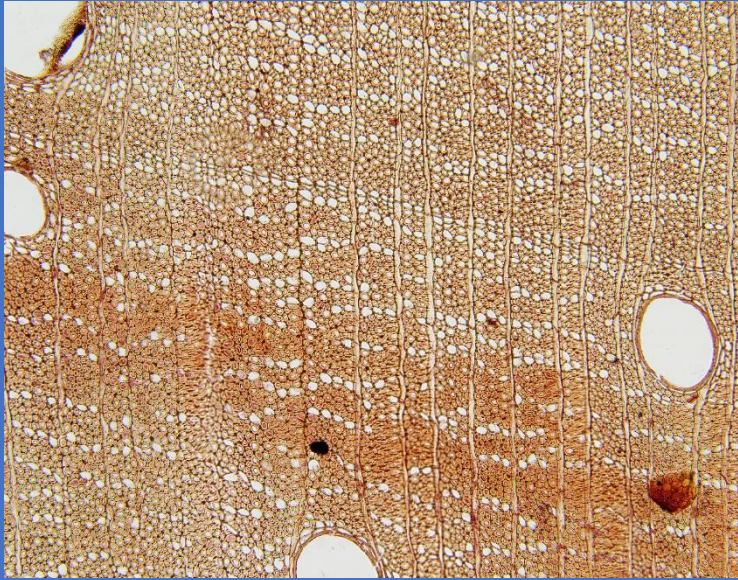


D. stevensonii 100–250 μm

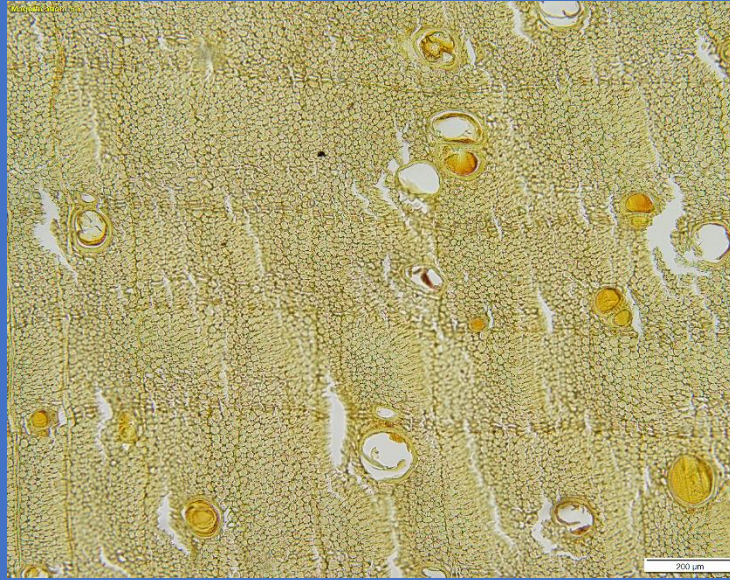


D. retusa 120–300 μm

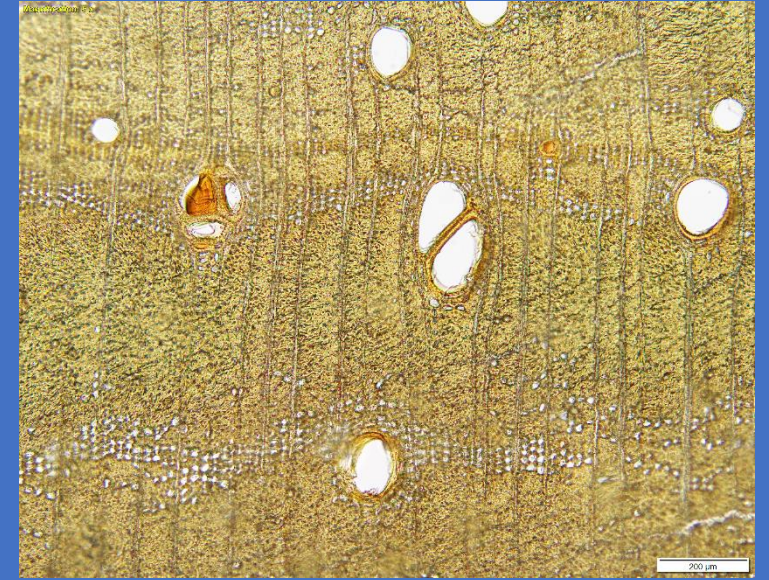
Ray width (cross-section)



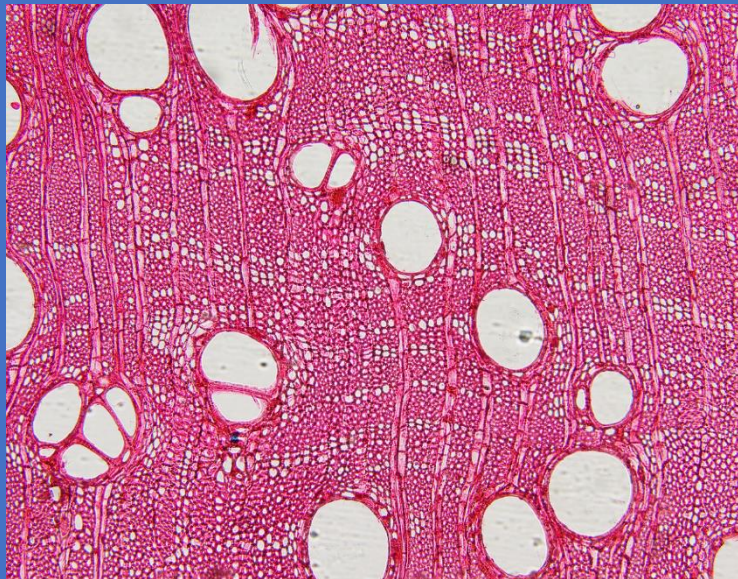
D. retusa 1 seriate



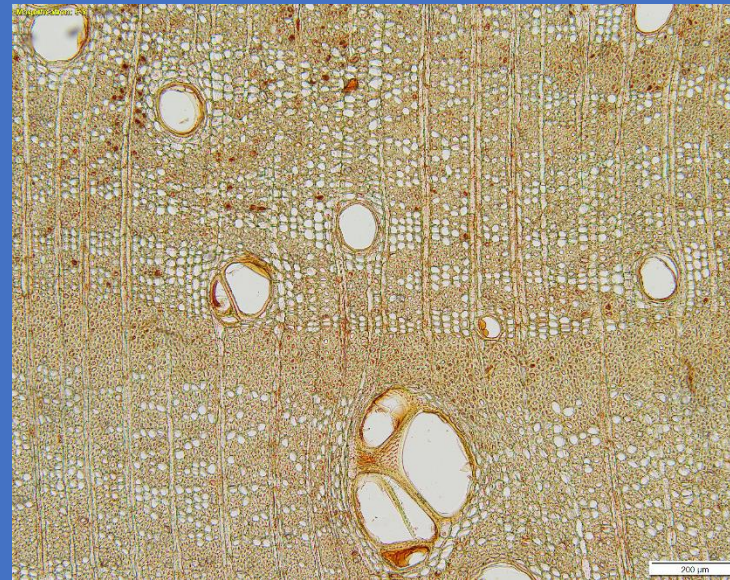
D. funera 1–2 seriate



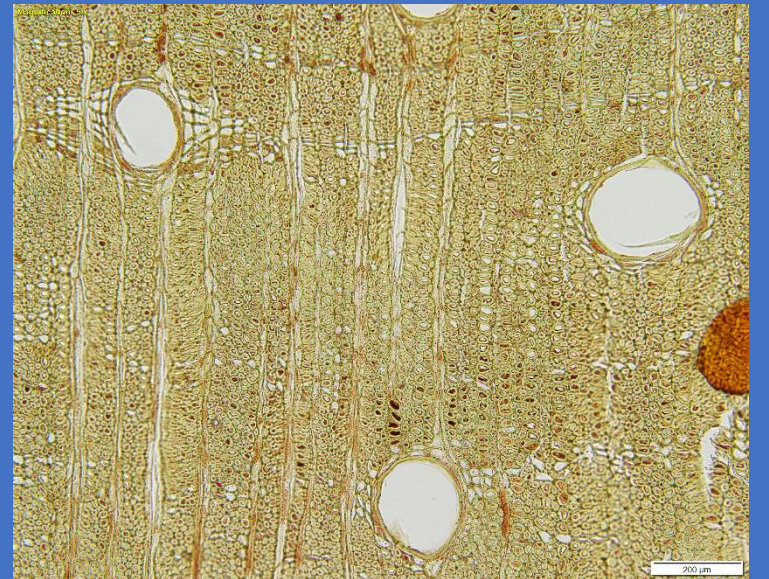
D. congestiflora 1–2 seriate



D. calycina 1–3 seriate

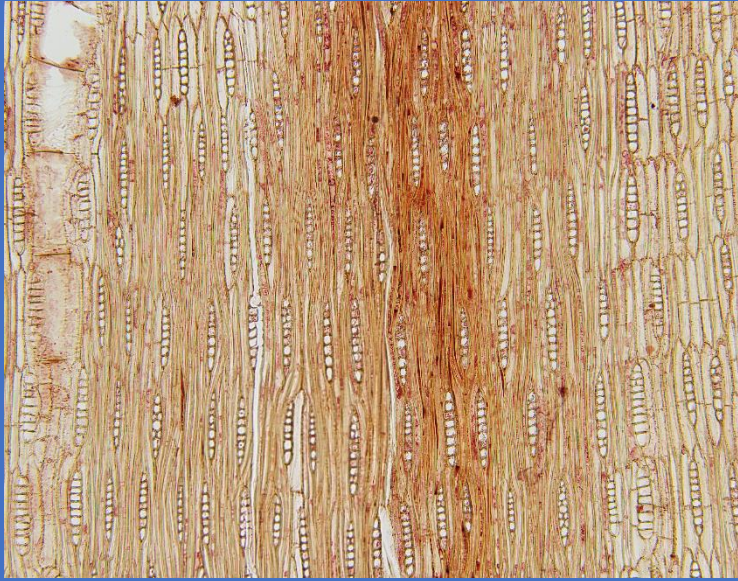


D. tucurensis 1–3 seriate

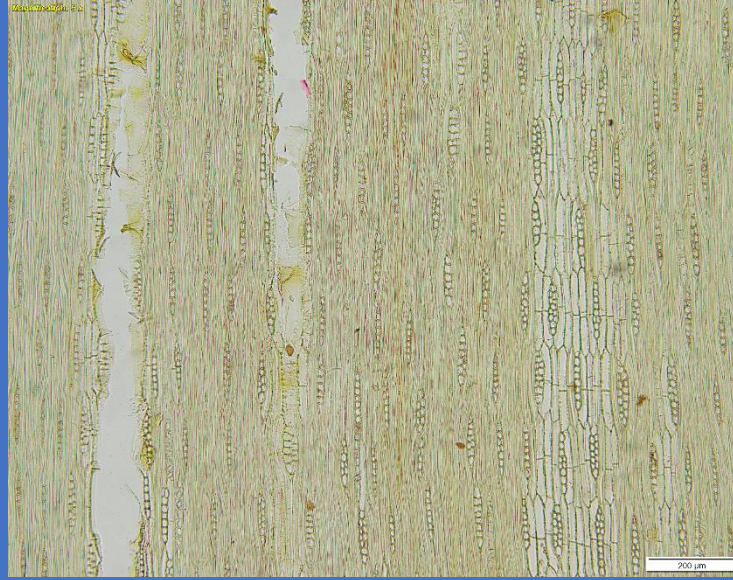


D. stevensonii 2–3 seriate

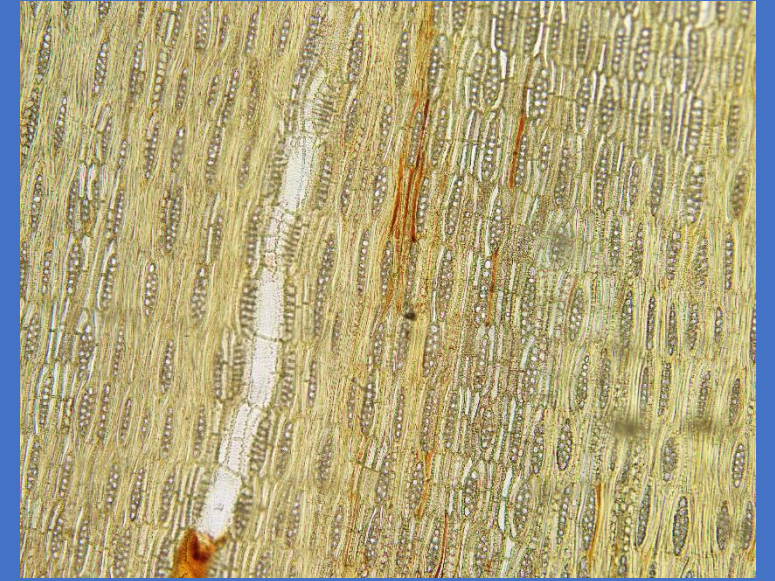
Ray width (tangential)



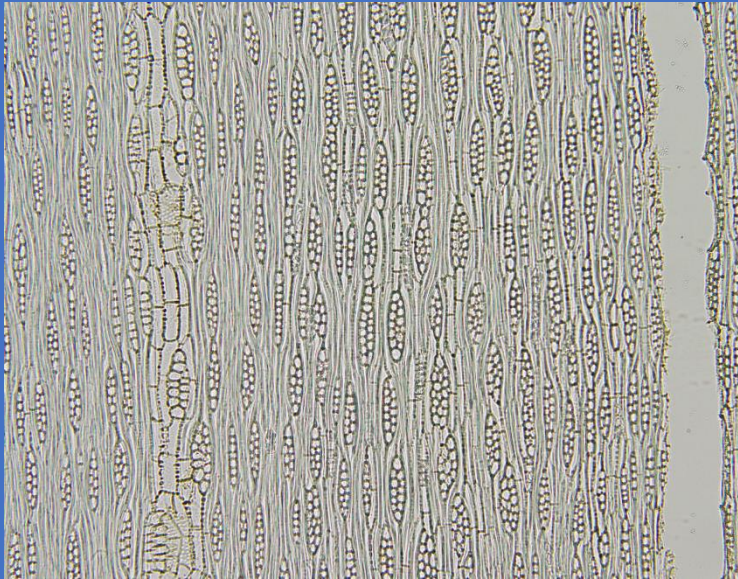
D. retusa 1 seriate



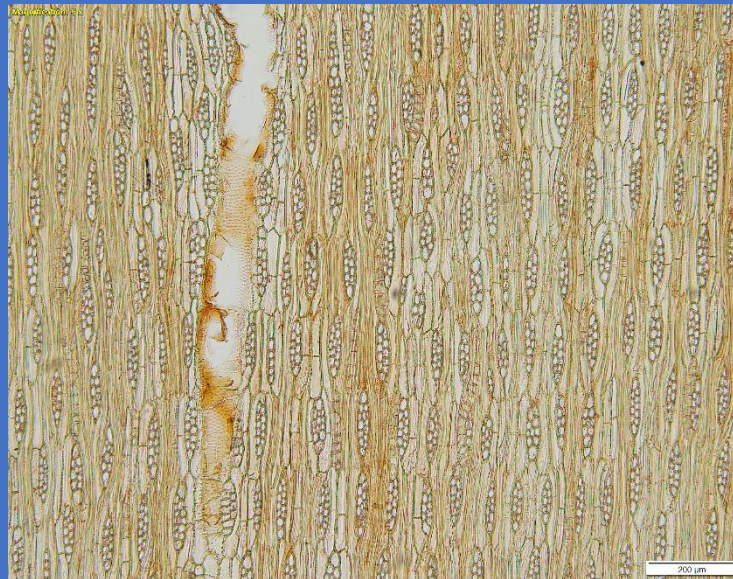
D. funera 1–2 seriate



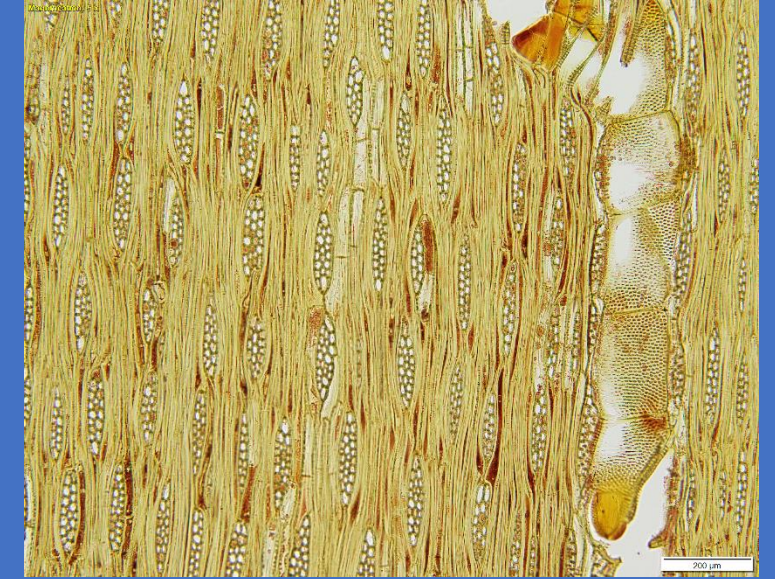
D. congestiflora 1–2 seriate



D. calycina 1–3 seriate



D. tucurensis 1–3 seriate



D. stevensonii 2–3 seriate

Axial parenchyma in *Dalbergia*

a,b: *D. congestiflora*

c: *D. funera*

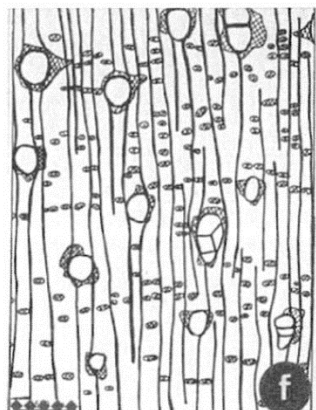
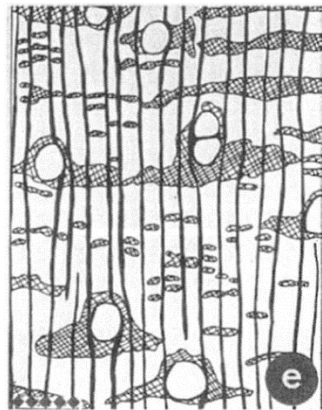
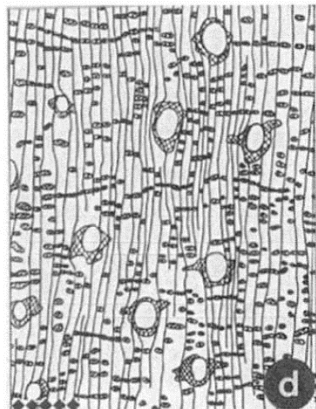
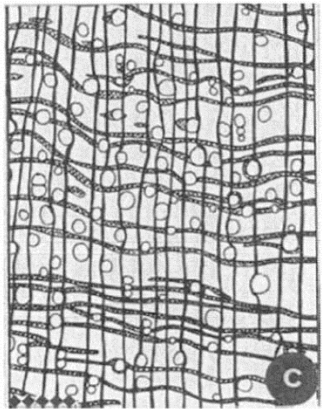
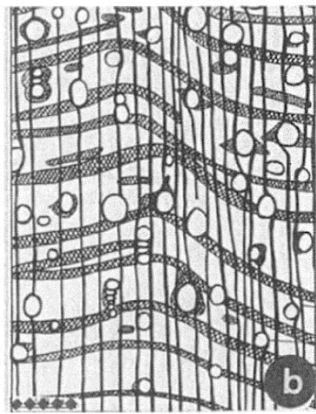
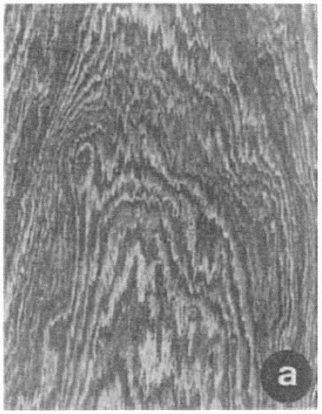
d: *D. retusa*

e. *D. tucurensis*

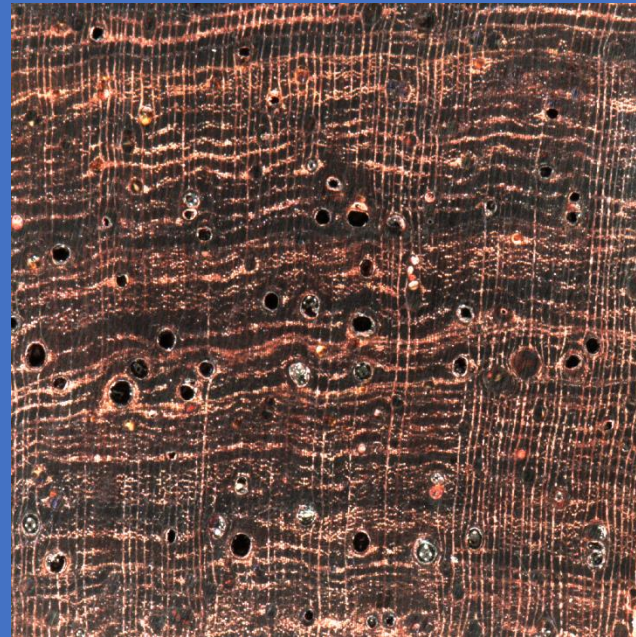
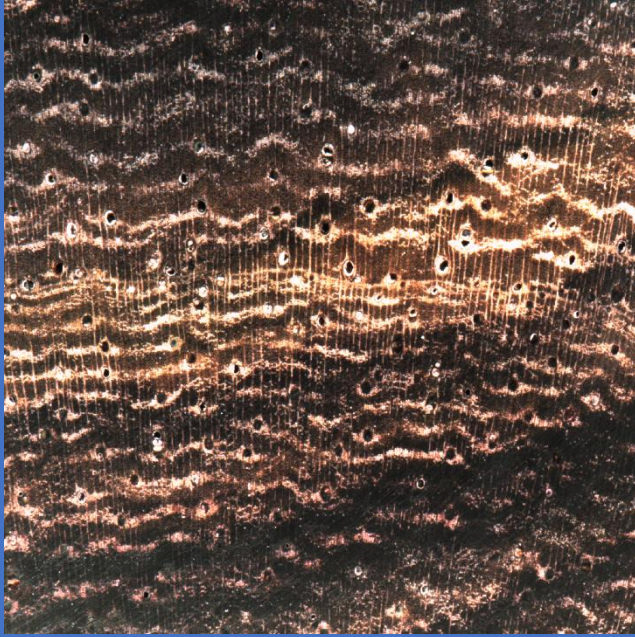
f: *D. stevensonii*

Richter, Krause, Muche 1996

Parenchyma types in *Dalbergia*:
vasicentric, aliform, confluent, diffuse,
diffuse-in-aggregates, narrow lines,
wide bands, marginal



Within-Species Variation

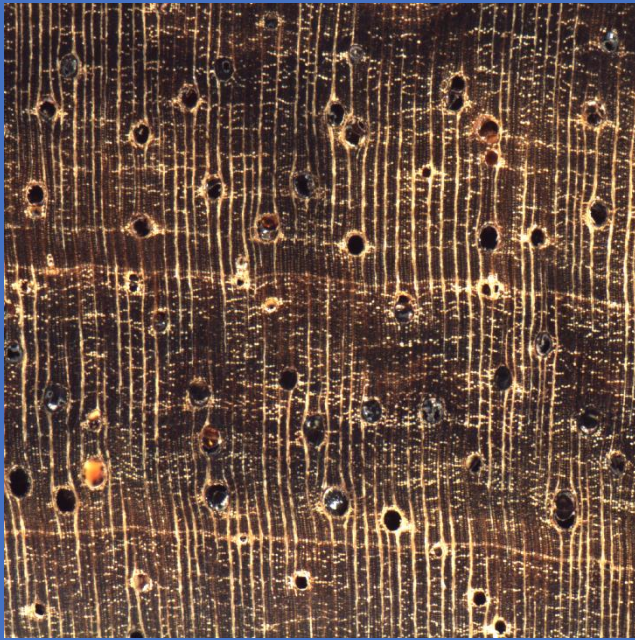


Dalbergia congestiflora

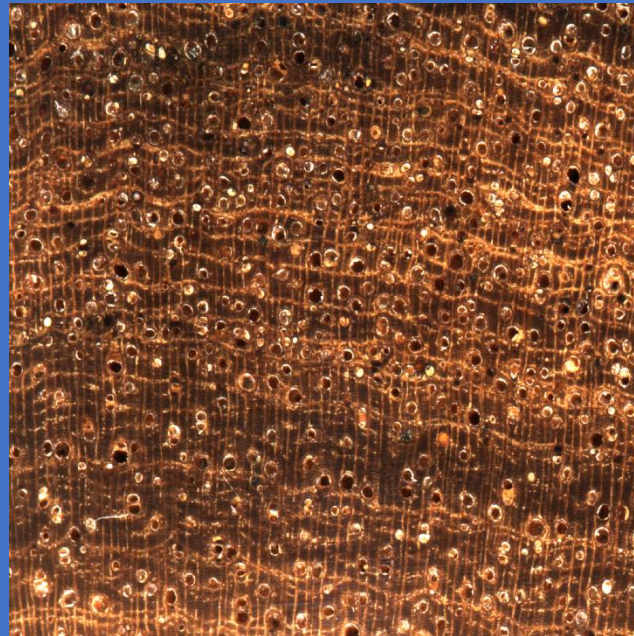
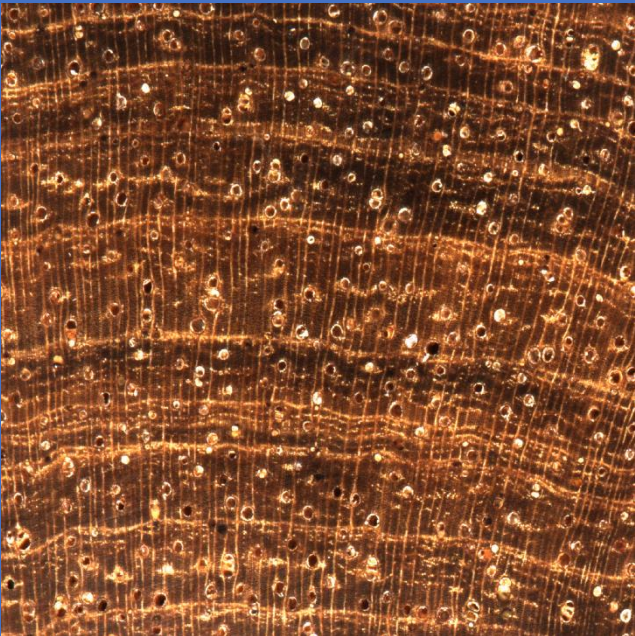


Dalbergia calycina

Within-Species Variation



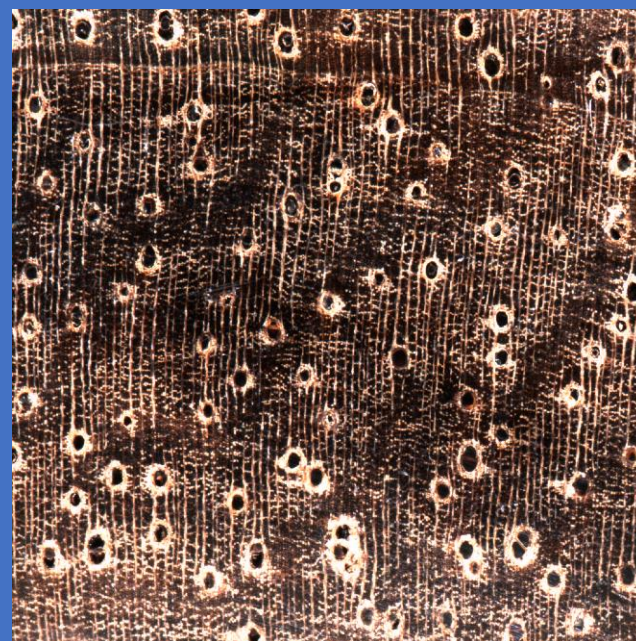
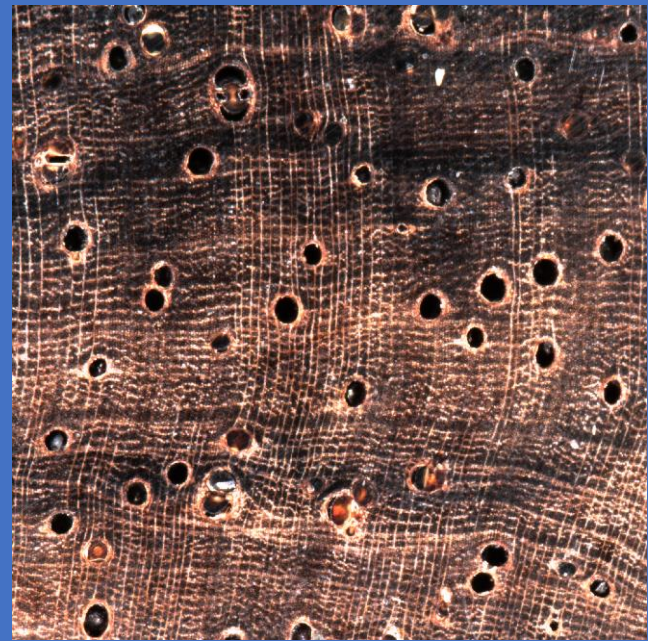
Dalbergia stevensonii



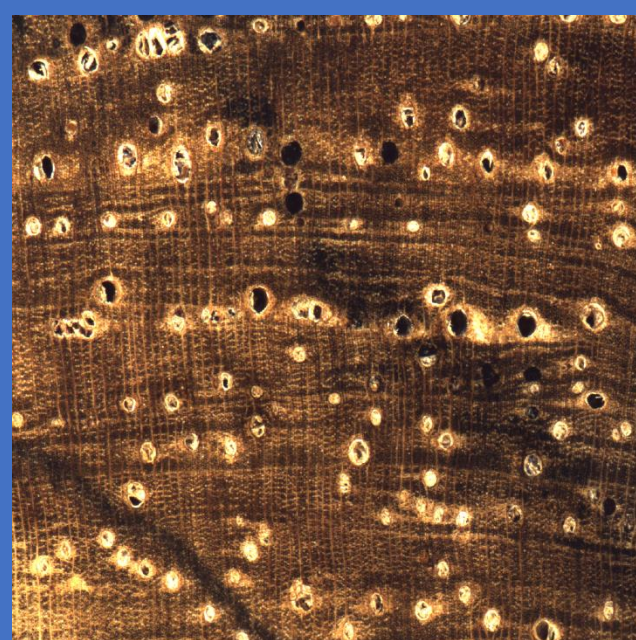
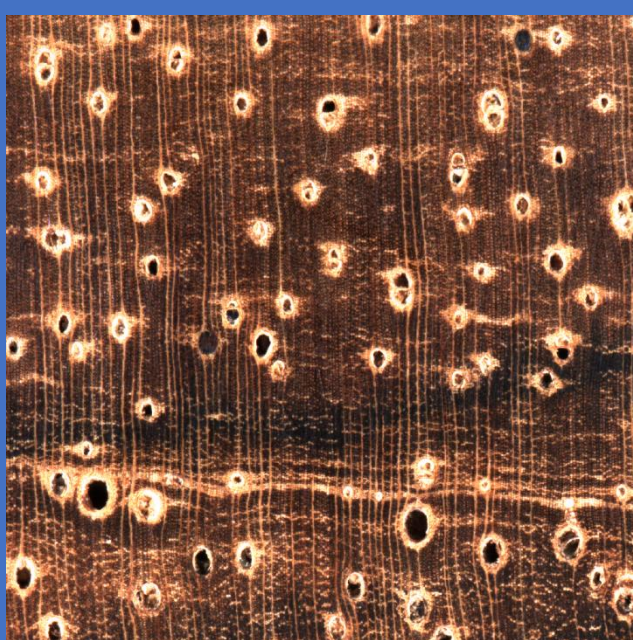
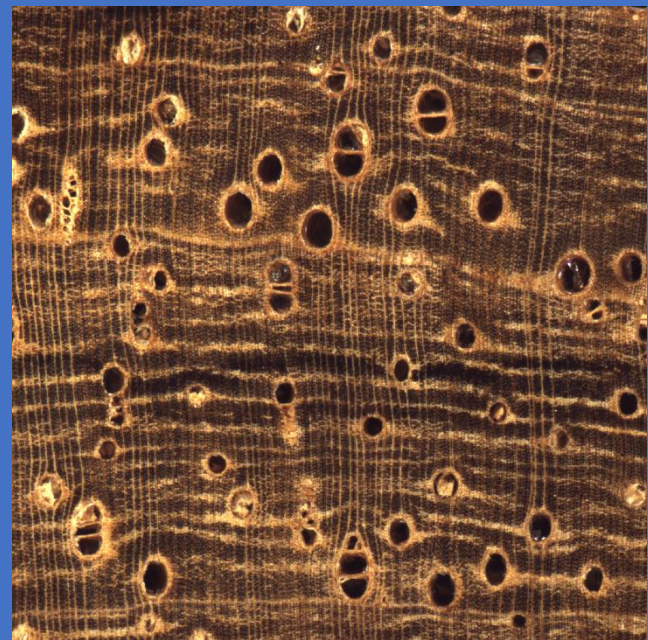
Dalbergia funera

Within-Species Variation

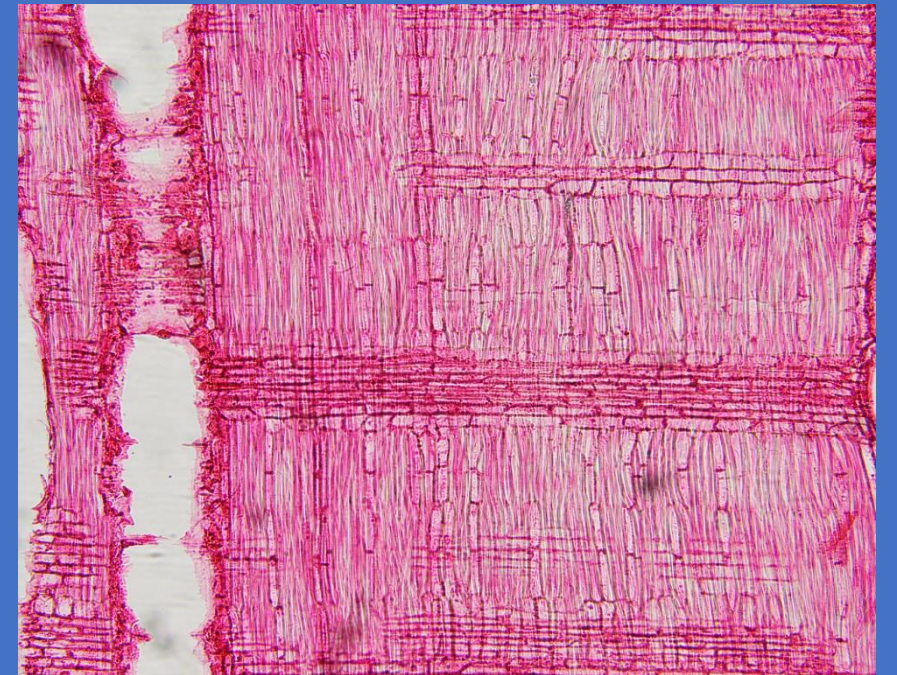
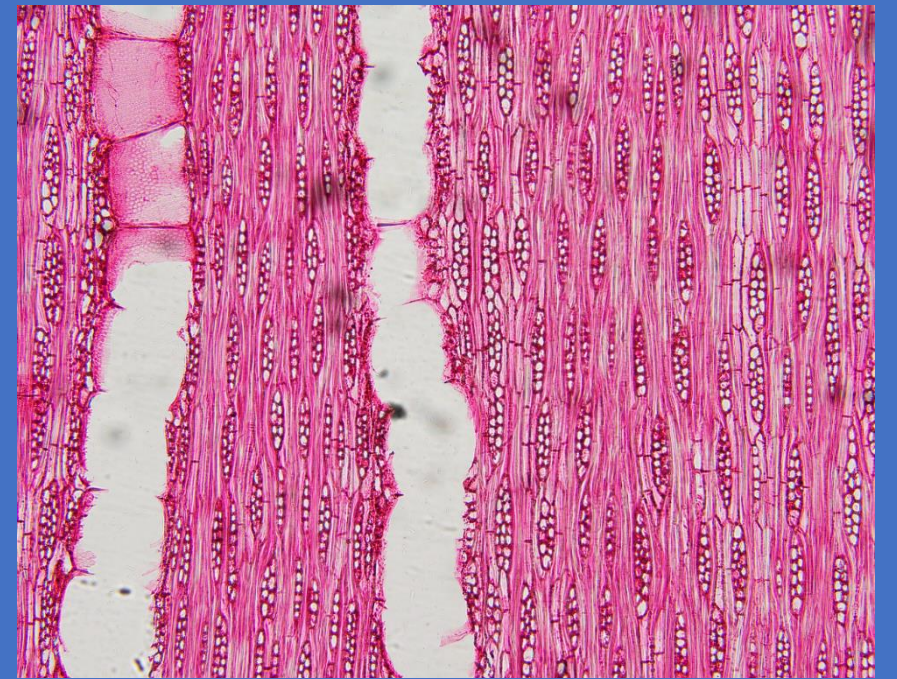
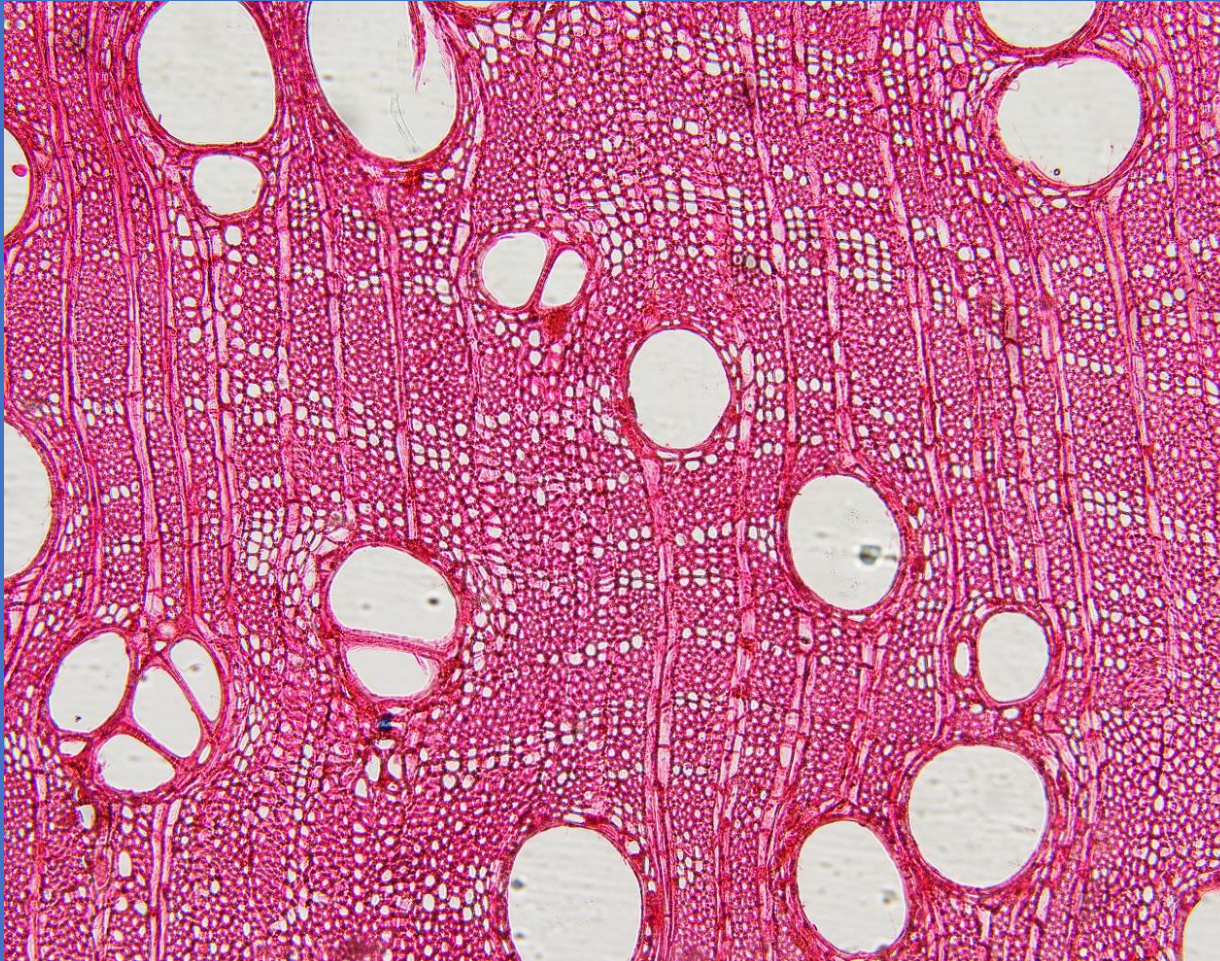
Dalbergia retusa



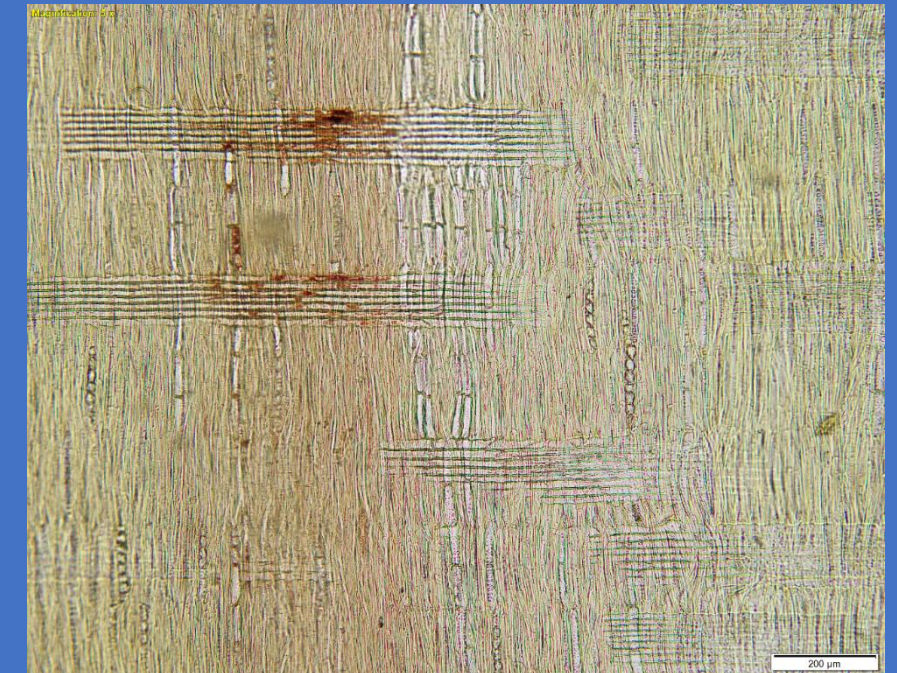
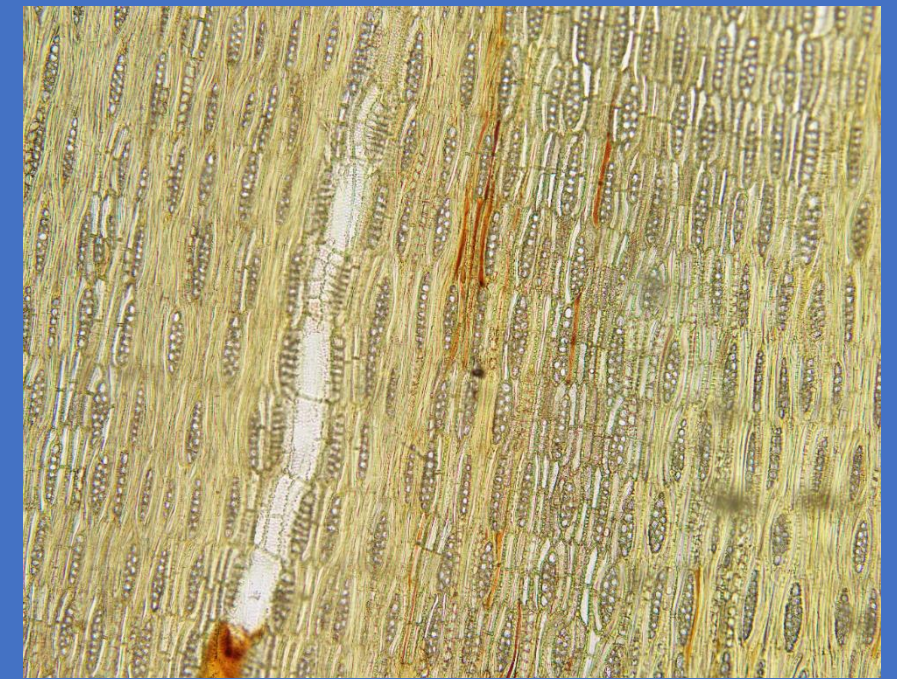
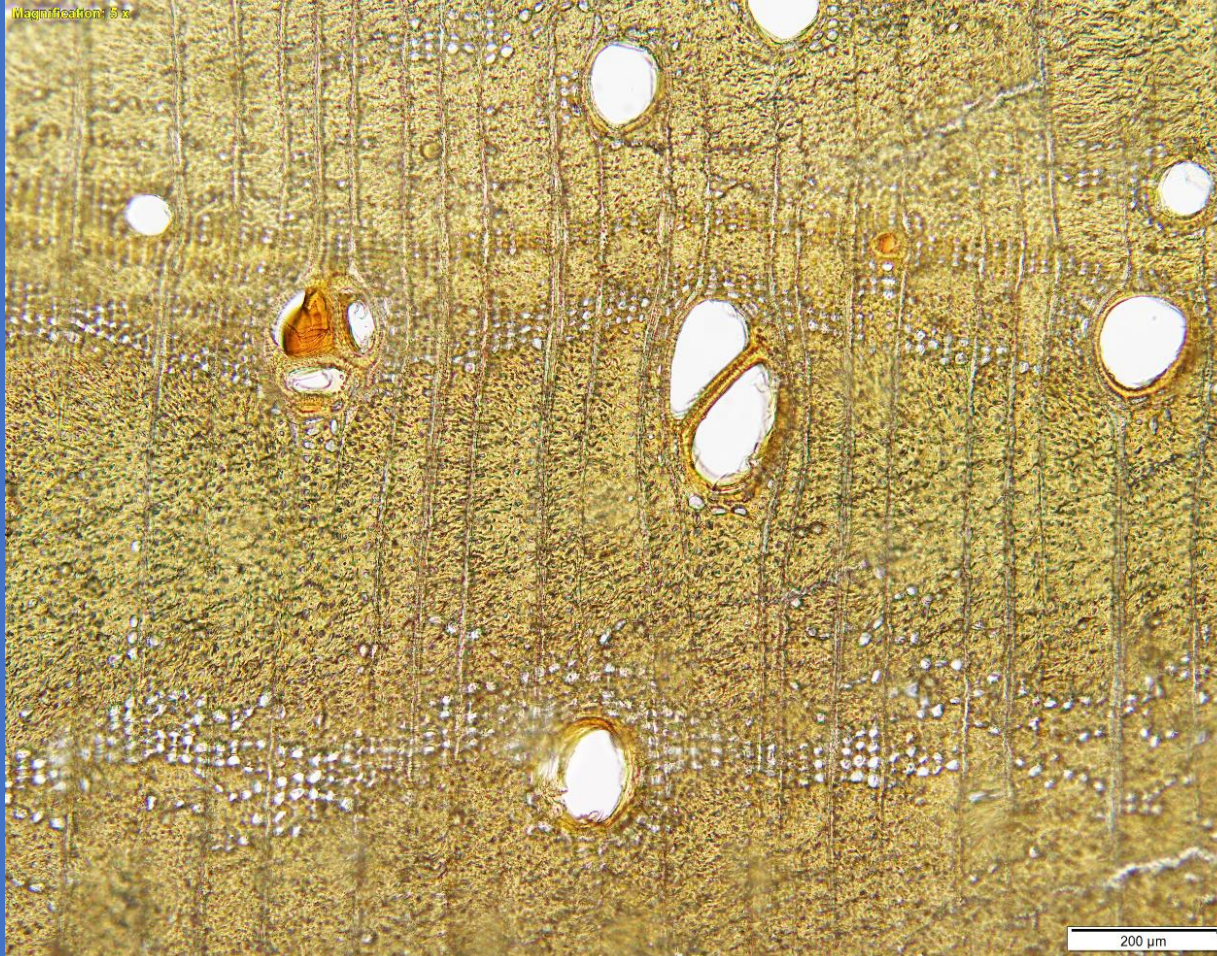
Dalbergia tucurensis



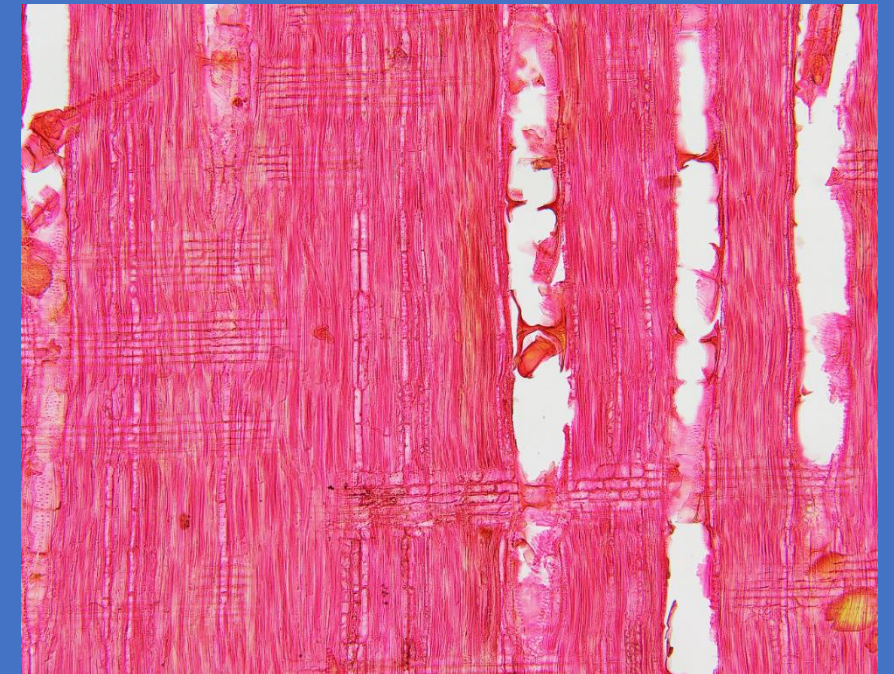
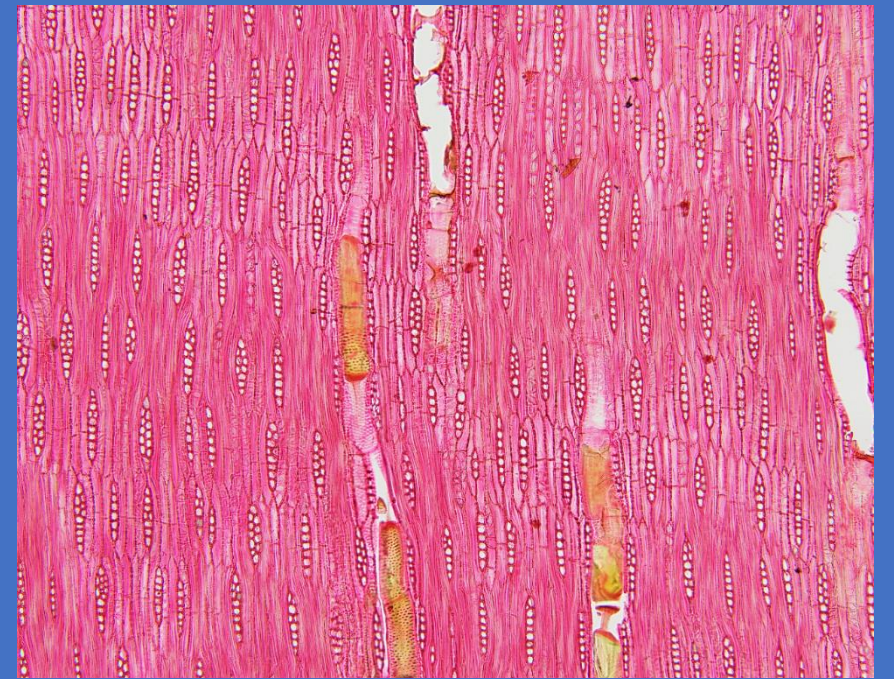
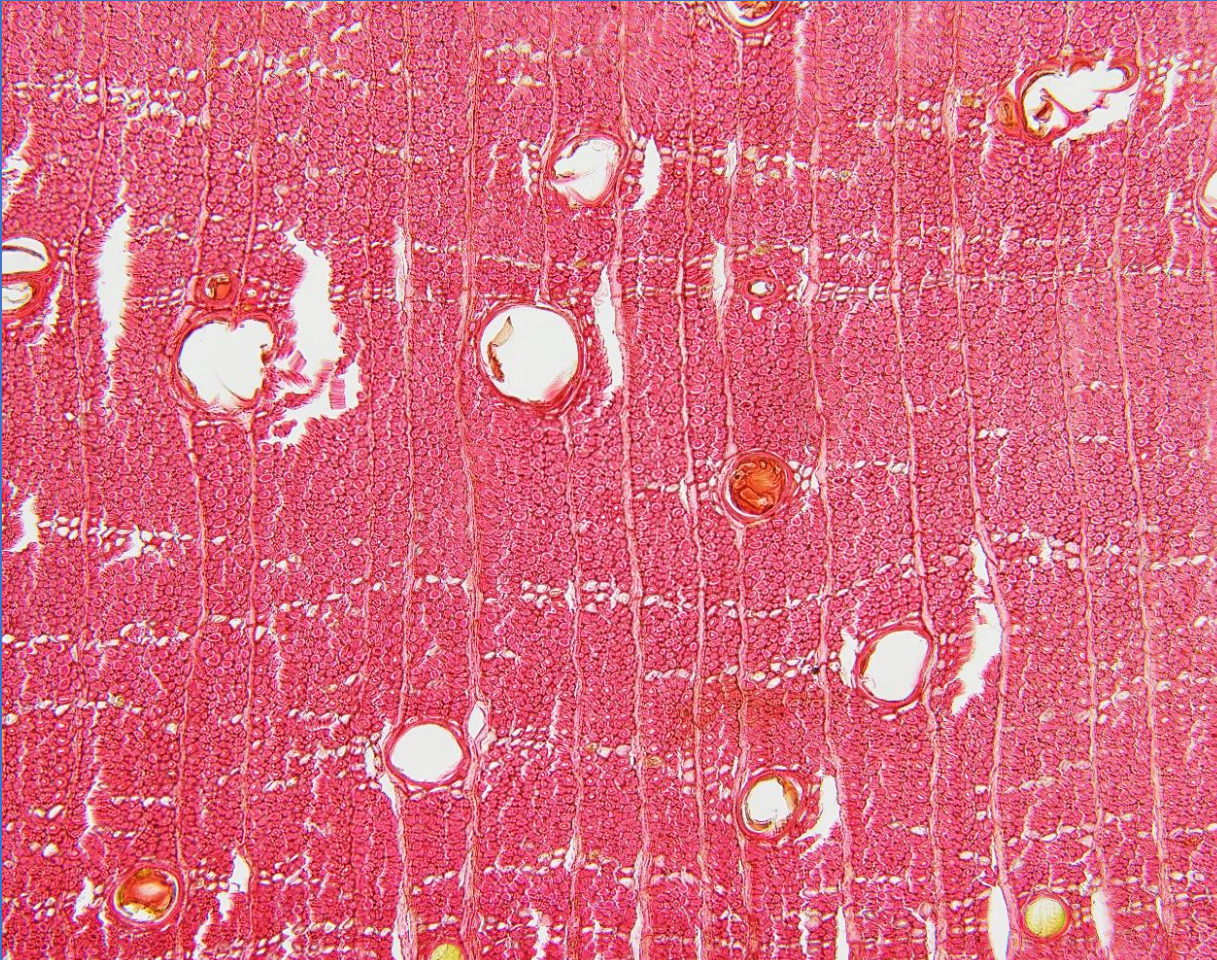
Dalbergia calycina



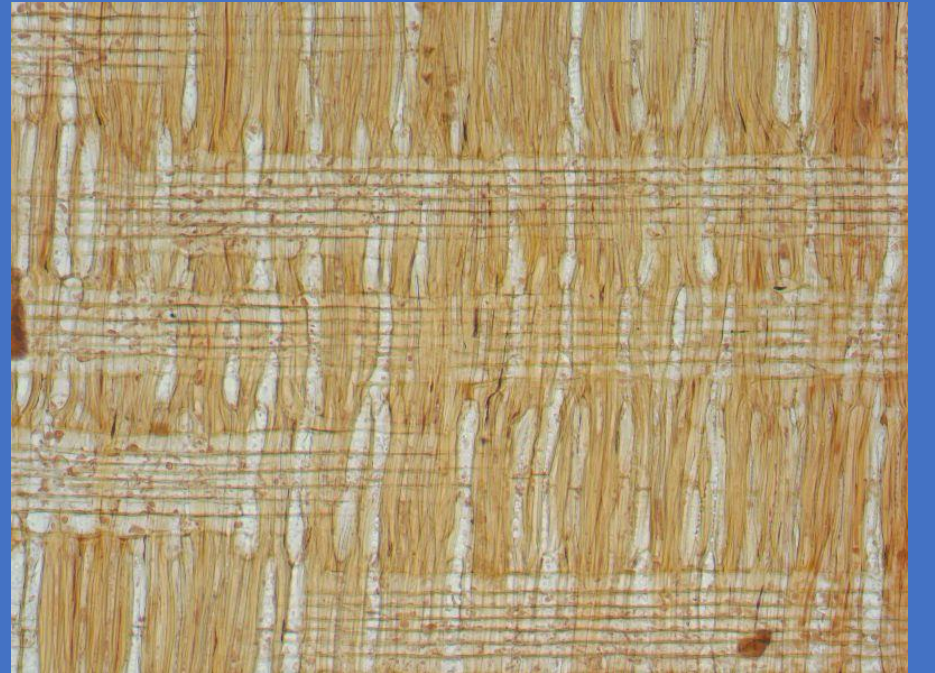
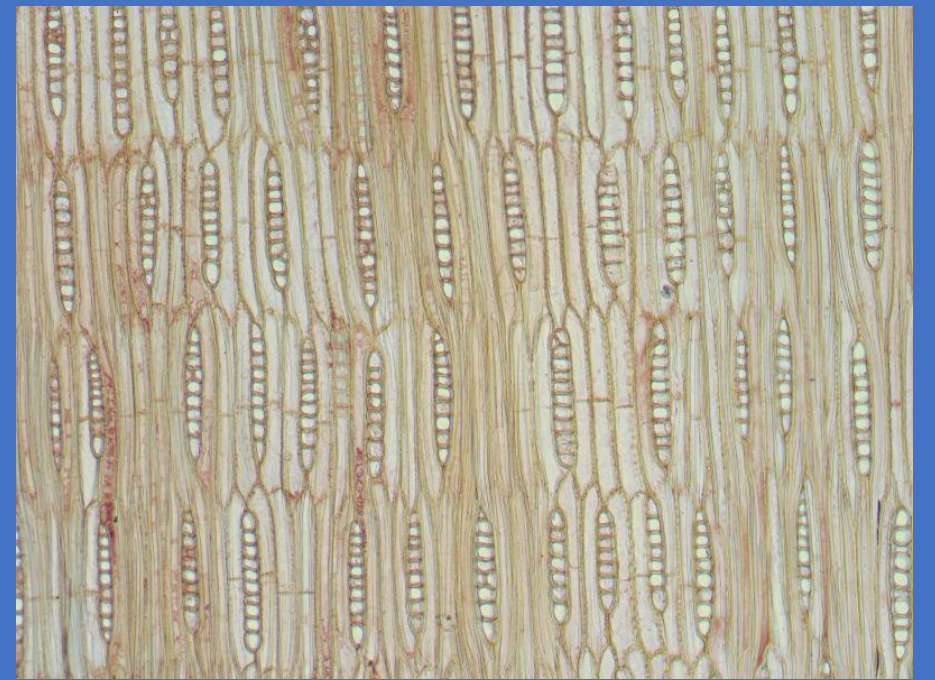
Dalbergia congestiflora



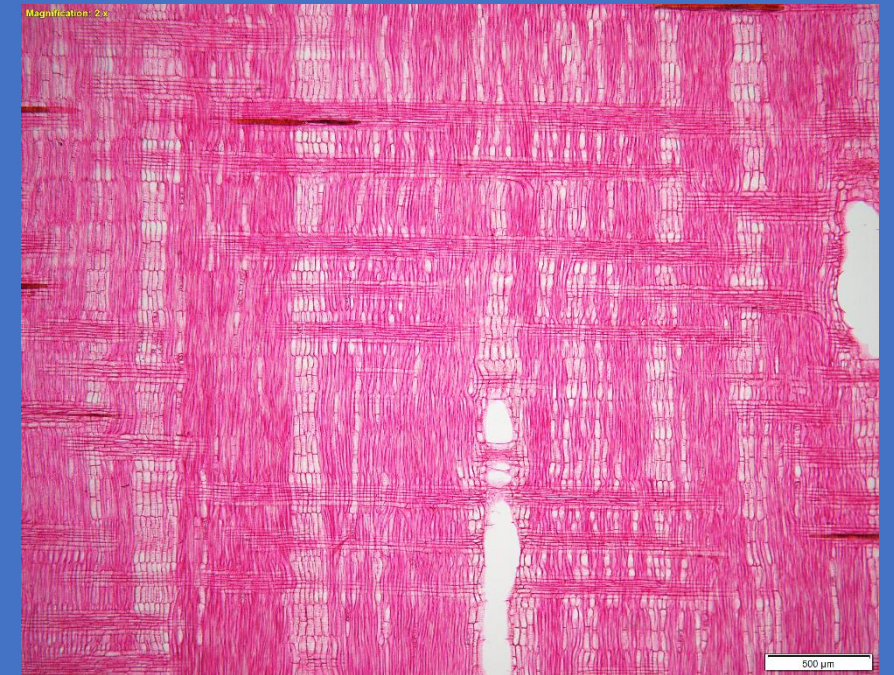
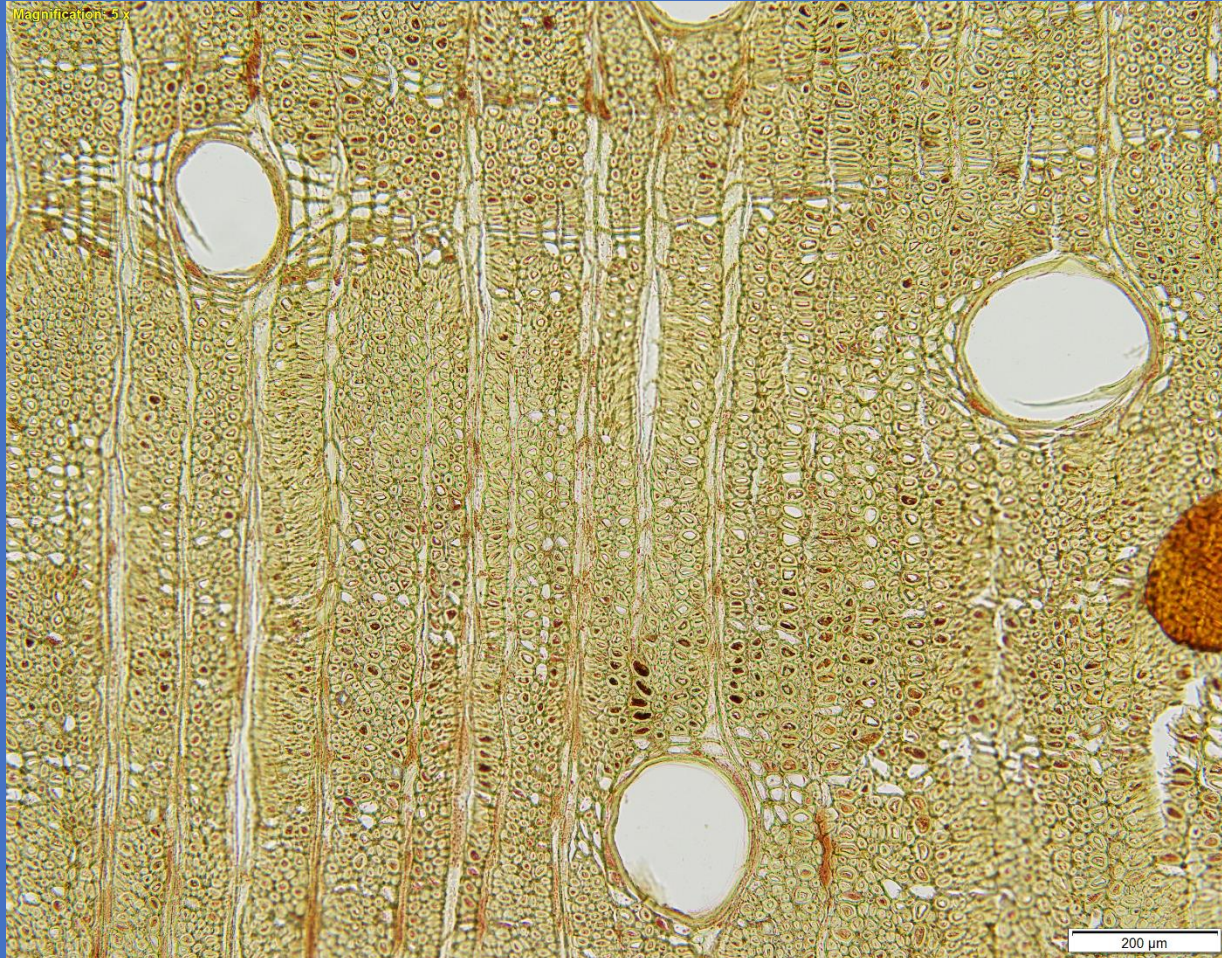
Dalbergia funera



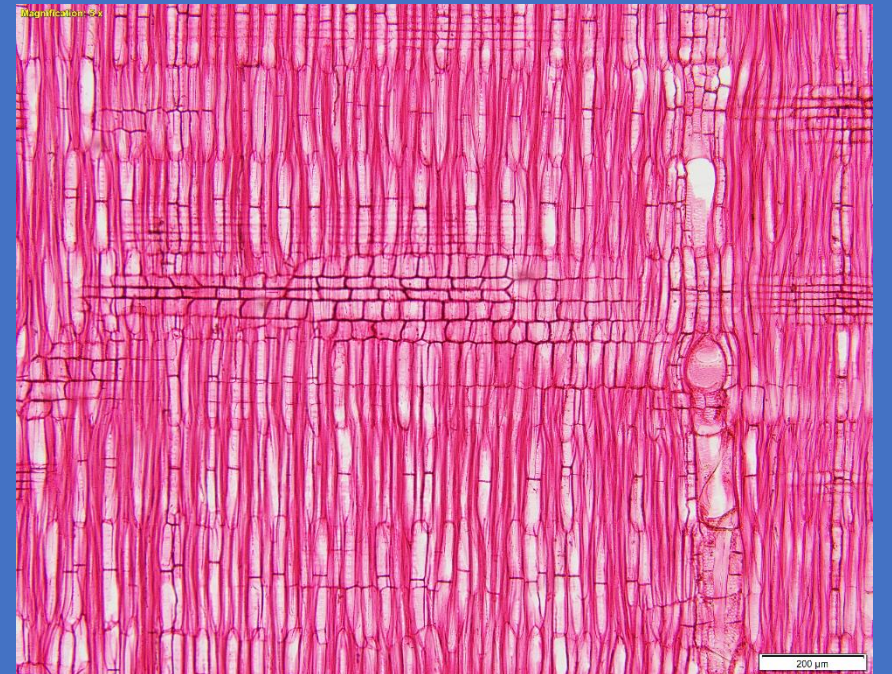
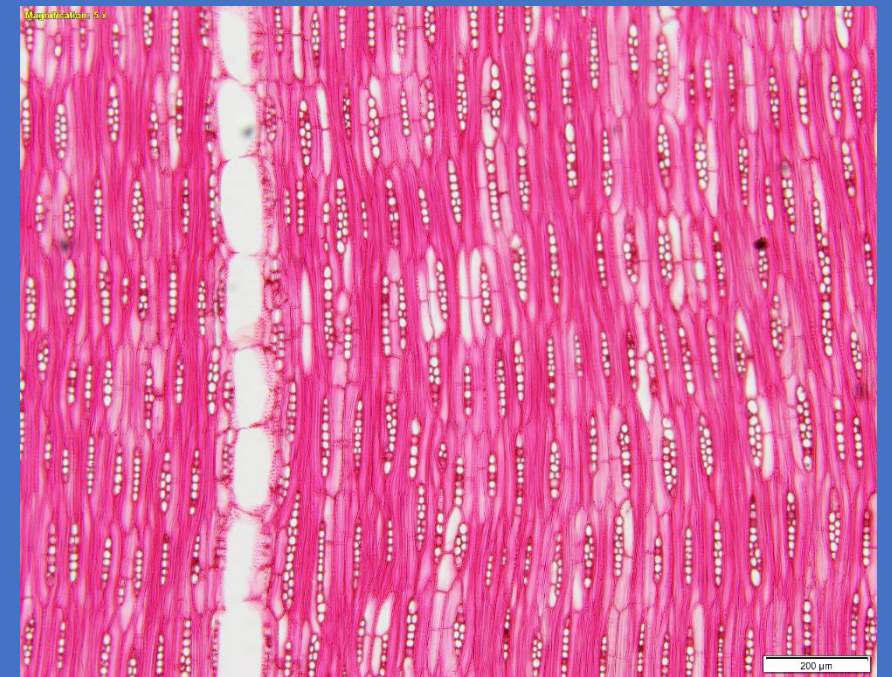
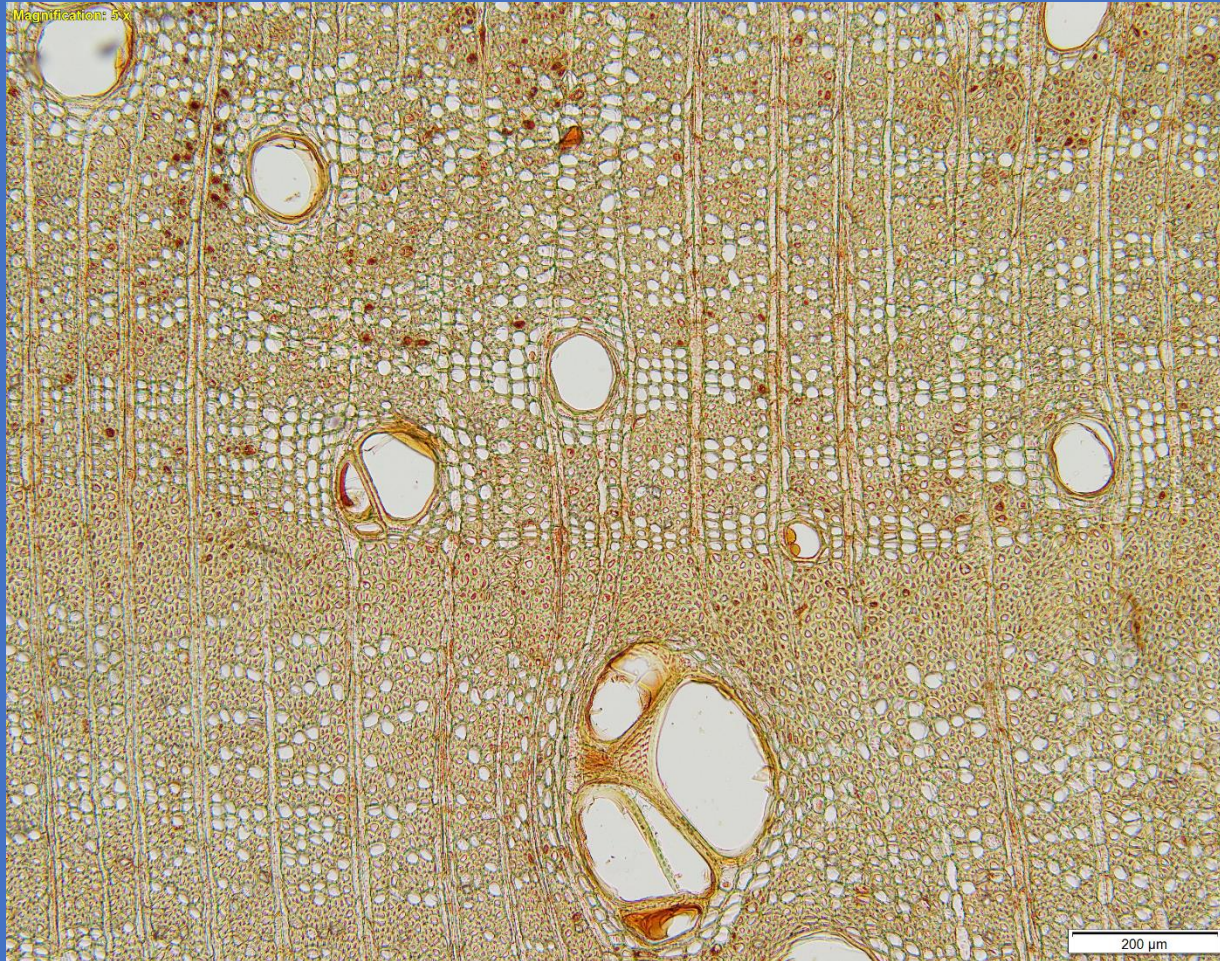
Dalbergia retusa



Dalbergia stevensonii



Dalbergia tucurensis



Pore Diameter & Frequency

	<u>Diameter (mm)</u>	<u>Frequency (pores/mm²)</u>
<i>D. funera</i>	0.04–0.13	10–15
<i>D. congestiflora</i>	0.07–0.16	5–10
<i>D. tucurensis</i>	0.09–0.21	3–6
<i>D. calycina</i>	0.09–0.27	5–8
<i>D. stevensonii</i>	0.10–0.25	3–6
<i>D. retusa</i>	0.12–0.30	3–6

Heartwood Density (g/cm³)

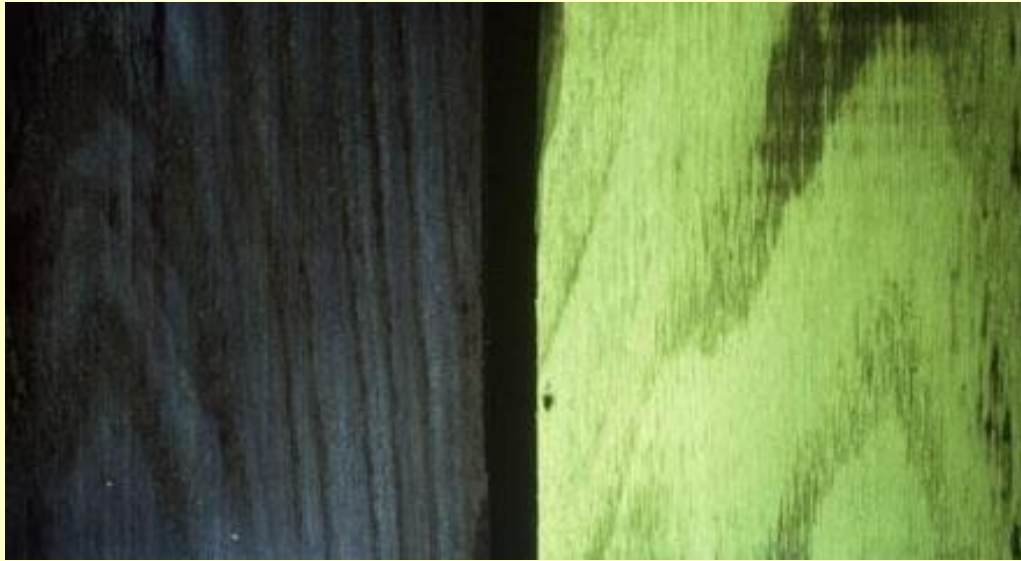
<i>D. tucurensis</i>	0.65–0.80
<i>D. calycina</i>	0.95–1.00
<i>D. stevensonii</i>	0.95–1.10
<i>D. funera</i>	1.00–1.15
<i>D. retusa</i>	1.00–1.20
<i>D. congestiflora</i>	1.00–1.25

Fluorescence

Wood

no

yes



Extracts

no

green/blue

blue



Fluorescence

	<u>Wood</u>	<u>Water extract</u>	<u>Ethanol extract</u>
<i>D. calycina</i>	no	yellow	greenish-blue
<i>D. congestiflora</i>	no	no	purple
<i>D. funera</i>	yes	yellow	greenish-yellow
<i>D. retusa</i>	no	no	greenish-yellow
<i>D. stevensonii</i>	no/weak	blue	blue
<i>D. tucurensis</i>	no	blue	blue

Questions?

