

# Alternative Tonewoods

For back and sides

# Really alternative to Rosewoods

- ▶ Study that showed that a guitar built with alternative tonewoods can be **indistinguishable** from each other in a blind test.
- ▶ Variety of both domestic and imported wood.
- ▶ Still mainstream market may demand rosewood

Effect of back wood choice on the perceived quality of steel-string acoustic guitars Samuele Carcagno,<sup>1,a)</sup> Roger Bucknall,<sup>2</sup> Jim Woodhouse,<sup>3</sup> Claudia Fritz,<sup>4</sup> and Christopher J. Plack<sup>1,b)</sup>

<https://asa.scitation.org/doi/pdf/10.1121/1.5084735?class=pdf>

A good luthier made 6 guitars and tuned them as he saw fit, basically building with the wood he had in hand. The results of our study indicate that steel-string acoustic guitars with backs and sides built using traditionally prized, expensive, and rare woods are not rated substantially higher by guitarists than guitars with backs and sides built using cheaper and more readily available woods. The poor ability of guitarists to discriminate under blinded conditions between guitars with backs and sides made of different woods suggest that back wood has only a marginal impact on the sound of an acoustic guitar.

Back Wood	F1 Hz	F2 Hz	F3 Hz
Brazilian rosewood	97	177	336
Indian Rosewood	101	188	368
Maple	100	187	363
Sapele	96	175	335
Walnut	98	182	347

# Alternative woods I have worked with

- ▶ Brazilian Rosewood (reference) 13.93 Gpa - 835 kg/m<sup>3</sup> Janka 12,410 N
- ▶ Bigleaf Maple - 10 Gpa - 545 Kg/m<sup>3</sup> - Janka 3,780 N
- ▶ Sapele - 12.04 Gpz - 670 kg/m<sup>3</sup> - Janka 6280 N
- ▶ Claro Walnut - 10 Gpa ?) - 640 kg/m<sup>3</sup>
- ▶ Honduran Mahogany - 10.06 Gpa - 590 kg/m<sup>3</sup> - 4020 N
- ▶ African Mahogany - 10. Gpa - 640 kg/m<sup>3</sup> - 4760 N
- ▶ Osage Orange - 12 Gpa - 855 kg/m<sup>3</sup> - Janka 11640 N
- ▶ Myrtle - 8.45 Gpa - 635 Kg/m<sup>3</sup> - Janka 5650 N
- ▶ Pau Ferro 10.68 Gpa - 865 kg/m<sup>3</sup> - Janka 8710 N

# Osage Orange

- ▶ Tonally very close to Brazilian. Currently used to make Fence poles.





Three piece backs are an option allowing for use of smaller tree. Three piece Pernambuco back



# Links

- ▶ Tonewood Data base <https://www.wood-database.com/>
- ▶ Tonewood Data Source <http://tonewooddatasource.weebly.com/>