

Supplies of Sitka spruce have been rapidly diminishing in the past 50 years. The following graph (from the US Forest Service, FS-265) shows that just in an 11-year period from 1969-80, exports of Sitka spruce from Alaska (which is used primarily for lumber and pulp) declined by more than a factor of 2×:

Wide logs of Brazillian rosewood – used for the backs of acoustic guitars were no longer available in significant quantities after 1965, prompting *e.g.* C.F. Martin to make 3-piece backs on their guitars after that. However, shortly thereafter, in 1969, Brazil embargoed exports of their rosewood entirely, forcing acoustic guitar makers *e.g.* to instead use Indian rosewood. Today, supplies of Indian rosewood are now rapidly diminishing as well. Rosewood is also used in acoustic and electric guitars for fretboards; it has warmth/mellowness, *e.g.* compared to bright, snappy-sounding ebony or *e.g.* maple fingerboards on electric guitars.

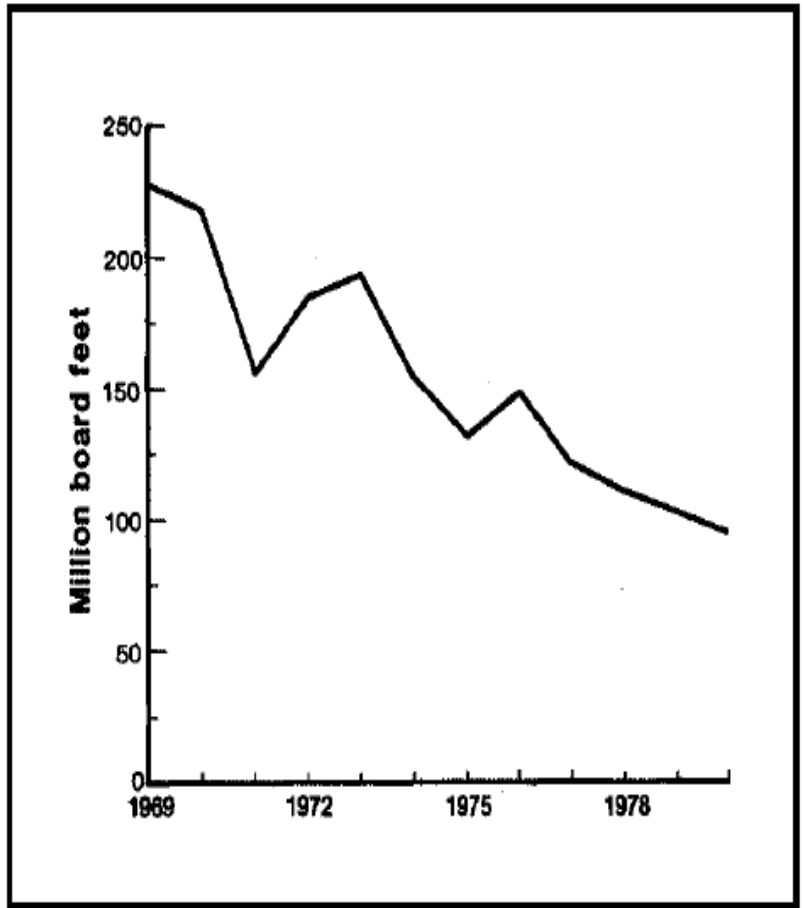


Figure 4—Sitka spruce lumber exported from Alaska ports, 1969-80.

Another example – for centuries, *the* best-sounding wood used for making violin, viola and cello bows has been pernambuco heartwood. Bows made of pernambuco are prized and revered for their perfect combination of weight, density, balance, and resiliency for advanced playing qualities. Its combination of rigidity, flexibility, density, beauty, and ability to hold a fixed curve are properties which make Pernambuco a unique material for bow-making. This slow-growing tree grows in the Brazilian Atlantic forest region. Today, Brazillian pernambuco, like their rosewood is also protected, *i.e.* it is illegal to export it from Brazil. Needless to say, this has left violin/viola/cello bow-makers in quite a quandary, not to mention the professional musicians who play these instruments for a living!

The amount of lumber used by acoustic guitar makers is relatively small – for example, Bob Taylor of Taylor Guitars estimates they use ~ 50 Sitka spruce logs per year – which is what a typical lumber mill can process in one 8 hour shift. Much of the production of lumber from Sitka spruce is used in the housing and pulp (*i.e.* paper) industries.

Because of the effects of global warming, musical tonewoods from new-growth trees does sound noticeably different in comparison to from tonewoods obtained from old-growth trees. Old-growth trees grew slowly, whereas new-growth trees, replanted by timber companies after *e.g.* clear-cutting vast areas of centuries-old old-growth forests, grow differently in the now nutrient-poor soil – clear-cutting drastically alters the ecological environment – serious erosion can occur, timber companies are now increasingly additionally using herbicides in the aftermath of clear-cutting to kill off unwanted species of plants before replanting new trees – see pix below.