

News & Updates

Tree Migration: BC Study Update

New research from the University of British Columbia suggests evolution is a driving mechanism behind plant migration, and that scientists may be underestimating how quickly species can move.

The study, published July 28 in the journal *Science*, builds on previous research that has shown some plants and animals are moving farther north or to higher altitudes in an effort to escape rising global average temperatures due to climate change.

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US New Home Sales: July 2016

New US single-family home sales unexpectedly rose in July, reaching their highest level in nearly nine years as demand increased broadly, brightening the housing market outlook.

The Commerce Department said Tuesday new home sales surged 12.4 per cent to a seasonally adjusted annual rate of 654,000 units last month, the highest level since October 2007.

CONTD PAGE 7

Housing Starts, Japan: June 2016

Japan's housing starts in June were 85,953 units (down - 2.5 per cent from the same month in the previous year), according to the Ministry of Land, Infrastructure, Transport and Tourism, said the *Japan Lumber Journal* Friday. Although figure was below previous year's for the first time in six months, when compared to the previous month, the figure increased by + 9.2 per cent. The seasonally-adjusted annual rate was 1,004,000 units (down - 1.3 per cent from the previous month), remaining above 1,000,000 units for two consecutive months. CONTD PAGE 7

Canada Wood Products Exports, US Imports: June 2016

Exciting data out Thursday from Statistics Canada shows volumes of exports of Canadian wood products to the US for January to June 2016 are up +18 per cent (to world up +11.7 per cent) to 17.8 million cubic metres compared to 14.6 million cubic metres for the first six months of last year.

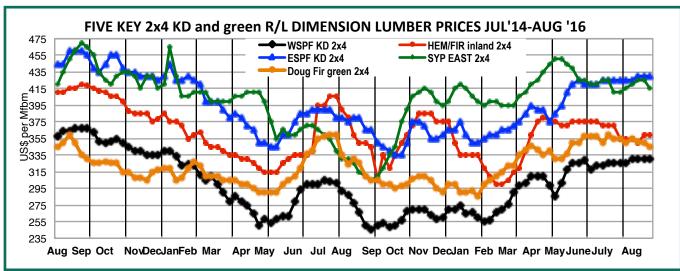
Elsewhere, the latest Industry Canada data, also out Thursday, shows values of imports of sawmill products from Canada for January to June 2016 are up +14.2 per cent to US\$2.9 million (CIF value), compared to US\$2.5 million for the first six months of last year.

Meanwhile, in the US imports of Canadian lumber by value for January to June this year are up +14.2 per cent, to US\$2.9 million, compared to US\$ 2.5 million for the first six months of 2015.

US imports of Canadian lumber by volume for the first six months of 2016, released Friday, reveal a +12.6 per cent increase, to 9.8 million cubic metres compared to 8.6 million cubic metres for January to June last year. CONTO PAGES 8 and 9

Japan Wood Products Demand: July 2016

Data for Japan's North America timber, as well as dimension lumber, imports for the first six months of 2016 have been released this week. $\,$ CONT'D PAGE 10



Artificial Migration of Trees

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New research from the University of British Columbia suggests evolution is a driving mechanism behind plant migration, and that scientists may be underestimating how quickly species can move, according to a UBC press release July 28.

The study, published today in the journal *Science*, builds on previous research that has shown some plants and animals are moving farther north or to higher altitudes in an effort to escape rising global average temperatures due to climate change.

Seed Dispersal

For the study, researchers used a small flowering plant (Arabidopsis thaliana), a common model organism in plant biology, to test the role of evolution in plant migration. Individual plants with different traits were cultivated together to create two sets of populations, one in which evolution was acting and another in which evolution was stopped.

They found that, after six generations, evolving plant populations dispersed seeds and migrated 11 per cent farther than non-evolving populations in landscapes with favourable conditions. Meanwhile, in landscapes where conditions were more challenging for the plants to disperse seeds, the evolving plant populations spread 200 per cent farther.

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We know from previous research that evolution might play a role in how fast a species can move across a region or continent," said Jennifer Williams, the study's lead author and an assistant professor in UBC's department of geography. "But what our study suggests is that evolution is not only a factor in movement, but that it can, in fact, accelerate the spread, and can do so predictably.

Jennifer Williams Lead Author

Assistant Professor in UBC's department of geography

Evolution Accelerates Speed Migration

The findings suggest that evolution accelerates the speed of migration, said Williams.

However, more research is needed to determine why the researchers saw a larger effect of evolution under the more challenging conditions, which in this case increased the speed of movement.

Williams said the findings underscore the importance for scientists to account for evolutionary change when predicting how quickly native species will be able to move as the Earth's climate continues to warm.

The study was co-authored by Bruce Kendall of the University of California, Santa Barbara, and Jonathan Levine of the ETH Zurich.

US Study: Assisted Migration Could Help Save Forests

The USDA Forest Service estimates that 97 per cent of the whitebark pine's natural range will disappear by 2100 in the US. The strategy that might save whitebark pines in the long run is one that's been discussed for decades among ecologists and is only now gaining traction: assisted migration. That basically means planting tree seeds in areas where they will be able to survive in the future.

"If we keep the status quo and not move stuff around, we run the risk of losing populations or species," said Laura Gray-Steinhauer, who researches climate change adaptation strategies at the University of Alberta to *The Verge* Monday.

Most trees don't move at all (though some do), and they take a long time — sometimes even 30 years or more — to start producing seeds. Seeds don't move on their own, either; they rely on the wind or animals like birds and squirrels to move around. While that might give an advantage to poplar seeds, which are light, it creates problems for large, heavy seeds like those produced by Torreya taxifolia, an endangered conifer.

Danger of Translocated Species Becoming Invasive

Many ecologists worry that translocated species might become invasive. In the US alone, invasive plant species cost an estimated US\$120 billion a year, according to the Nature Conservancy.

Trees are also homes for a lot of creatures, including bugs and fungi. Moving trees means also moving this entire household of potential pests. Fungi can infect other plants and end up wiping out other trees. "We're not moving species into vacuums, we're moving them into communities where other species exist," says Mark Schwartz an ecologist at the University of California, Davis. "Engaging in the intentional moving of species for the conservation benefits is likely to have cases where we also cause unintended damage."

Canada and US Efforts

In Canada, some assisted migration programs are already underway, but they're done a bit more cautiously. In British Columbia, for example, the western larch is being migrated north, outside of its range. But when an area is planted, only 10 per cent of the trees can be western larch, says Aitken. That's to be on the safe side: if the western larches don't survive, the other trees will eventually occupy their space. If they do, they won't be able to take over.

In the US, forest managers are considering a less controversial form of assisted migration that has to do with seed selection, according to Christopher Woodall, a research forester at the Forest Service. Instead of moving trees north, forest managers are selecting seeds of the same tree species that live in warmer climates and are therefore more resistant to droughts.

Madison's Weekly Softwood Lumber Key Prices Table www.madisonsreport.com



-	This Week	Last Wee	k Change	Month Ago	Change	Year Ago	Change
Prices are in U.S. dollars per 1,000 fbm (net FOB mill)							
WSPF KD R/L 2x4	330	330	0	326	+4	278	+42
WSPF KD R/L 2x6	310	310	0	310	0	284	+16
SYP KD R/L East Side 2x4	415	425	-10	415	0	325	+95
SYP KD R/L East Side 2x6	385	395	-10	370	+15	295	+100
ESPF KD R/L 2x4	430	430	0	425	+5	380	+50
WSPF KD PET 2x4 Stud	295	290	+5	285	+10	255	+25
WSPF KD PET 2x6 Stud	235	245	-10	255	-20	270	-30
Douglas Fir Green R/L 2x4	345	350	-5	350	-5	325	+20
Douglas Fir Green R/L 2x10	340	345	-5	330	+10	410	-70
ESPF KD 2x4 8ft Stud	375	375	0	365	+10	335	+40
OSB Ontario 7/16" (CDN\$/msf)	395	385	+10	370	+25	236	+140
CSPlywood Toronto 3/8" (CD	N\$/msf) 491	491	0	485	+6	447	+51

Madison's Weekly Softwood Lumber News

New Home Sales, US

CONT'D FROM PG 2 June's new home sales pace was revised down to 582,000 units from the previously reported 592,000 units.

It's still less than half the record pace of 1.39 million sales in 2005, before the housing bubble burst. July's increase, however, likely exaggerates housing market strength as it has not been matched by robust housing starts.

Still, sales were up 31.3 per cent from a year ago.

The supply of homes fell to 4.3 months from 4.9 months in June. There were 233,000 new houses on the market at the end of July, the least since November.

The median sales price of a new house declined - 0.5 per cent from July 2015 to US\$294,600, Tuesday's report showed.

New-home sales, which account for about 10 per cent of the residential market, are a timelier barometer than transactions on existing homes.

Japan Housing Starts

CONT'D FROM PG 2 Housing starts of owner-occupied houses in Japan were 26,944 units (up + 1.1 per cent from the same month of the previous year), increasing for five months in a row. Those of built-for-sale houses were 21,617 units (down - 15.2 per cent) said the *Japan Lumber Journal*

Friday. This is because those of condominiums decreased to 10,185 units (down - 28.1 per cent), but those of single-family houses were 11,279 units (up + 1.1 per cent).

Starts of prefabricated houses were 13,328 units (up + 2.4 per cent), while those of two-by-four houses were 10,529 units (down - 1.8 per cent).

Housing starts of wooden houses were 47,502 units (up + 2.9 per cent). The ratio of wooden houses by the number of units was 55.3 per cent, increasing by 1 point from the previous month.

Total housing starts for the first half of 2016 (January - June) were 463,469 units (up + 5.2 per cent from the same period of the previous year).

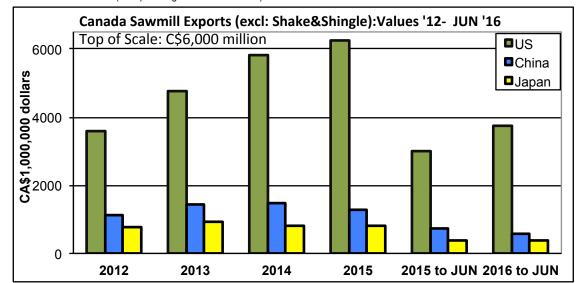


Canada Sawmill Product Exports to US, China, and Japan: 2012 to June 2016

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Canadian Total Exports — Industry Canada

NAICS 321111 - Sawmills (except Shingle and Shake Mills)



VALUES of Canada Sawmill Product Exports to US, China, and Japan: 2012 to June 2016

Canada Sawmill Products Exports: 1H 2016 2016 / 2015 Canada Softwood Lumber Exports 1H 2016: 2016/2015

US	C\$3,752 million	+ 19.7%	US	17.7 million cubic metres	+ 18%
China	C\$ 573 million	- 28.2%	China	3.2 million cubic metres	- 8.9%
Japan	C\$ 386 million	- 17.4%	Japan	1.0 million cubic metres	- 4.1%

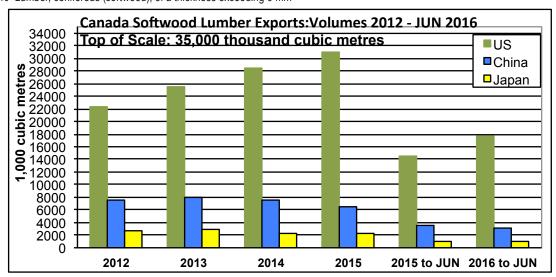
VOLUMES of Canada Sawmill Product Exports to US, China, and Japan: 2012 to June 2016

Canadian International Merchandise Trade Database — Statistics Canada

Table 980-0044

44. Domestic exports - Wood and articles of wood; wood charcoal

440710 Lumber, coniferous (softwood), of a thickness exceeding 6 mm



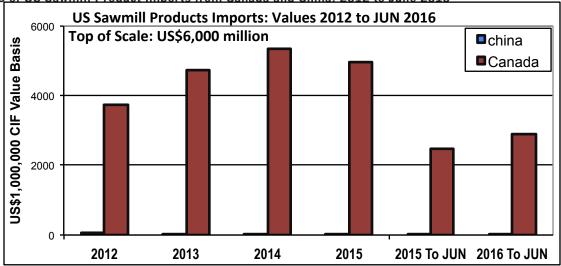
US Sawmill Product Imports from Canada and China: 2012 to June 2016

CONT'D FROM PAGE 8

US International Trade Statistics — US Census Censtats Database

Value of Exports and Imports by (NAICS - 321113) Sawmill Products

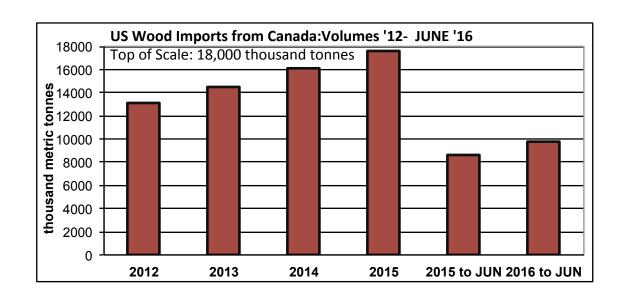
VALUES of US Sawmill Product Imports from Canada and China: 2012 to June 2016



US Sawmill P	roducts Imports 1H 2016:	2016/2015	US Wood Imports 1H 2016:	2016/2015	
Canada	US\$2,896 million	+ 20.3%	Canada 9.8 million cubic metres	+ 12.6%	
China	US\$ 26 million	+28 2%			

VOLUMES of US Sawmill Product Imports from Canada and China: 2012 to June 2016

Trade between USA and Canada (Monthly) — US Department of Transportation 44----Wood and articles of wood



North American Timber and Log Market in Japan

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Export prices of Douglas fir logs in Japan for August shipment settled at the same level as in July, said the *Japan Lumber Reports* Friday. Log production on the supply side was also steady.

Ocean freight charges have been climbing so C&F prices were up but a strong Yen offsets the cost increase.

Canadian Douglas Fir Logs

Canadian Douglas fir log prices for August were unchanged at ¥109 per cubic metre, said the *Reports*. Japananes plywood mills have been running at full capacity but the use of Doug fir logs is limited so supply and demand are balanced.

The lumber market in Japan has been in a slump, said the *Reports*, so there has been a buyers' market for logs.

North American Lumber to Japan

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The lumber market in Japan for both domestic and import has been weak due to the recent appreciation of the Yen, and a bearish mood that is prevailing.

Japan Lumber Reports

Supply/Demand of American Timber

(1,000 cubic meters)

	Import			Consumption			Stocks		
	Log	Lumber	Total	Log	Lumber	Total	Log	Lumber	Total
2012	3,048	2,753	5,801	3,059	2,766	5,825	248	194	442
2013	3,420	2,867	6,287	3,421	2,837	6,258	269	223	492
2014	3,093	2,362	5,455	3,073	2,430	5,503	288	155	443
2015	2,565	2,340	4,905	2,622	2,350	4,972	231	170	401
2016									
YTD	1,497	1,070	2,567	1,434	1,100	2,534			
Jan.	216	196	412	234	205	439	213	162	375
Feb.	234	167	401	260	167	426	188	162	349
Mar.	317	161	478	190	183	373	315	139	454
Apr.	264	189	453	305	180	485	273	148	421
May	236	181	418	233	181	414	276	149	425
June	230	175	406	212	184	396	295	140	435

SOURCE: Japan Lumber Journal

North American Lumber to Japan

North American lumber export prices climbed since 2Q but the landed Yen costs has been dropping due to the strong Yen so there is no bottom feeding, said the *Reports*.

For domestic lumber, log prices dropped since last May so many players anticipated price reduction announcements by major Douglas fir sawmills.

Based on the rule that market prices would drop if imported costs drop, the present rate is getting to the ceiling so since late July inquiries have been looking for a price bottom.

J Grade Lumber Prices in Japan

The price of SPF J grade lumber in 3Q are up US\$10-\$15 mfbm, and spot purchase prices are up by US\$5, according to the *Reports*.

For Canadian suppliers these J grade prices are not attractive, since domestic prices of #2&Btr shot up to US\$330 in the second week of August, US\$52 higher than the same time last year.

Japan's total import of 2x4 lumber for the first six months of 2016 was 605,920 cubic metres, a -7.1 per cent drop from the same time one year ago.