Alliance for Green Heat · American Forest Foundation · American Lumber Standards Committee · City of Chicago Bureau of Forestry · Colorado State University, Department of Bioagricultural Sciences and Pest Management · The Davey Institute · Florida Native Plant Society · Greenspace-the Cambria Land Trust · Georgia Native Plant Society · Iowa State University, Department of Natural Resource Ecology and Management · Louisiana Native Plant Society · Massachusetts Association of Campground Owners · Mycological Society of America · National Association of State Foresters · National Plant Board · National Wooden Pallet and Container Association · Native Plant Society of Texas · North American Maple Syrup Council, Inc. · North Carolina Native Plant Society · New York State Department of Environmental Conservation · Oregon Department of Agriculture · Oregon State University, Department of Botany and Plant Pathology · Purdue University, Department of Entomology · Society of American Florists · Society of Municipal Arborists · Tennessee Native Plant Society · The Nature Conservancy · University of California Berkeley, Department of Plant & Microbial Biology · Virginia Native Plant Society

January 31, 2011

Rebecca A. Bech
Associate Deputy Administrator
Plant Protection and Quarantine
Animal and Plant Health Inspection Service
Whitten Building, Room 302-E
1400 Independence Avenue, SW
Washington, DC 20250

Re: Docket No. APHIS-2010-0019

Dear Rebecca,

Our groups have come together with many others under the auspices of the Continental Dialogue on Non-Native Forest Insects and Diseases. The Continental Dialogue is a collaboration of diverse interests aimed at addressing the threat of non-native insects and diseases on America's forests.

The undersigned groups appreciate this opportunity to support the proposal to eliminate the current exemption in 7 CFR §319.40-3, which allows wood packaging material from Canada to enter the United States without having been treated in accordance with requirements of the International Standard for Phytosanitary Measures (ISPM) 15. Under the proposal, wood packaging originating in Canada would become subject to the same requirements as wood packaging from any other country.

We wholeheartedly support the proposed elimination of the current exemption for wood packaging entering the country from Canada. Furthermore, our review of this proposal leads us to recommend that APHIS continue to pursue a method to control movement of pests domestically that would replace the patchwork of federal quarantines and state and local regulations to thus simplify compliance by the shipping industry.

Ending the exemption is important because of the huge volume of imports from Canada. Until 2009, the U.S. imported more goods from Canada than from any other country in the world. Canada is now a close second to China in providing imports to the U.S. Those goods move primarily on wood pallets to all parts of the U.S. Similarities of forest ecosystems facilitate pest establishment. Wood-inhabiting pests in wood packaging from Canada have been intercepted at the border, despite the fact that WPM from Canada is unregulated and so inspected only rarely.

The clearest need for this amendment is associated with pests introduced from other continents, such as Eurasia. While both the United States and Canada have extant populations of the introduced Asian longhored beetle (ALB), emerald ash borer (EAB), pine shoot beetle (PSB), and the European woodwasp, *Sirex noctilio*, important U.S. forest and urban forest resources vulnerable to these pests have so far escaped invasion. We applaud APHIS' past actions to protect these forests from potential infestation *via* transport of infested wood packaging or other pest vectors from whatever source, U.S. or Canadian. We recommend further that APHIS pursue adoption of a program governing domestic movement of wood packaging to curtail movement of these pests. Furthermore, Canada has some introduced pests, e.g. brown spruce longhorned beetle (BSLB), that are not yet found in the United States; APHIS should take action to prevent their introduction here.

We note that Canada is expected to institute reciprocal requirements for wood packaging from the United States, and support that action as well. Canada imported close to $187 billion (Canadian) worth of merchandise from the U.S. in 2009, including nearly $42 billion worth of machinery and mechanical appliances[1] – heavy items that are likely to be transported in wooden crates and pallets. Wood packaging sent from the United States to Canada could harbor a wide range of pests, including the Eurasian species mentioned above and several additional pests of pines (Mediterranean pine engraver, *Orthotomicus erosus*; the redhaired pine bark beetle, *Hylurgus ligniperda*; and an unnamed roundhead borer *Arhopalus syriacus*). The goldspotted oak borer *Agrilus auroguttatus* and walnut twig beetle, *Pityophthorus juglandis* appear to be native to restricted areas of the United States – complicating management in this country. However, they are not considered native to Canada and thus pose a concern to that country. The banded elm bark beetle *Scolytus schevyrewi* has become established in four Canadian provinces as well as at least 29 U.S. states reaching from the Atlantic to the Pacific. Nevertheless, it is important to avoid contributing to its spread to those regions of Canada still free of it. The banded elm bark beetle appears better able to survive Canadian winters than the other introduced vector of Dutch elm disease, the European elm bark beetle; it could thus contribute greatly to disease spread in Canada. According to our understanding, all these beetles except *A. syriacus* would require the presence of bark. While the current regulations do not require removal of bark from wood packaging moving from the U.S. to Canada, ending the exemption will also address this problem.

Tree-killing pests native to one part of North America could cause immense damage if introduced to another, distant region. The Great Plains provides a particularly important biogeographic barrier which insects and pathogens are highly unlikely to cross without human assistance. An example of this threat is the mountain pine beetle, native to western parts of North America. Were it to be transported to the pine systems of the American southeast, it could cause considerable damage. It is thus incorrect to say that the fact that the U.S. and Canada share forest types along our border

[1] http://cansim2.statcan.gc.ca/cgi-win/cnsmcgi.pgm; accessed January 7, 2011.

reduces the need to address this risk. Of course, such risk-reduction efforts need to address wood packaging in domestic as well as international use.

In our view, the U.S. and Canada should work more closely together to curtail movement of tree-killing pests from one area to a geographically separate region where they might encounter naïve hosts or other conditions that facilitate establishment at damaging levels. Since national, state, and provincial borders do not coincide with biogeographic realms, such cooperative efforts should not be constrained by such borders.

We provide additional information about specific species in an attachment to our letter.

We note that the pest risk assessment[2] that accompanies the proposal makes no mention of the most compelling recent example of a pathogen/insect vector being transported in wood packaging. That is laurel wilt disease, caused by the previously undescribed pathogen *Raffaelea lauricola* vectored by the ambrosia beetle *Xyleborus glabratus*. While this disease would seem to pose little threat to Canada because of probable climatic limitations, it has certainly been destructive in the United States. While most of the known hosts are found in warm temperate or tropical climates, sassafras (*Sassafras albidum*) does reach the Niagara region of Canada. Its vulnerability would depend on climatic factors and the unresolved question of whether sassafras proves suitable for widespread attack by the redbay ambrosia beetle.[3]

In summary, the groups listed below wholeheartedly support the elimination of the current exemption in 7 CFR §319.40-3. Furthermore, we recommend that APHIS continue to pursue a method to control movement of pests domestically that would replace the patchwork of federal quarantines and state and local regulations to thus simplify compliance by the shipping industry.

Sincerely,

John Ackerly, President, Alliance for Green Heat

Sally Anderson, President, Virginia Native Plant Society

Robert L. Bendick, Director of U.S. Government Relations, The Nature Conservancy

Tom Bruns, Professor, Department of Plant & Microbial Biology, University of California Berkeley and President, Mycological Society of America

Robert K. Davies, New York State Forester and Director, Division of Lands & Forests, New York State Department of Environmental Conservation

Jay Farrell, Executive Director, National Association of State Foresters

Marcia Galvin, Executive Director, Massachusetts Association of Campground Owners

Tom Harrington, Professor, Department of Plant Pathology, Iowa State University

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[2] Risk analysis for the movement of SWPM (WPM) from Canada into the US, USDA APHIS August 2009

[3] Mayfield, A., Barnard, E., Bates, C., Boone, A., Bulluck, B., Cameron, S., Campbell, F., Duerr, D., Fraedrich, S., Hanula, J., Harrington, T., Johnson, J., Peña, J., Rabaglia, R., Smith, J., Vankus, V. 2009. Recovery plan for laurel wilt on redbay and other forest species caused by *Raffaelea lauricola*, vector *Xyleborus glabratus*. National Plant Disease Recovery System, a cooperative project of The American Phytopathological Society and The United States Department of Agriculture, posted at http://www.ars.usda.gov/research/npdrs.

Tom Harville, President, North Carolina Native Plant Society

Richard Hawley, Executive Director, Greenspace-the Cambria Land Trust

Daniel J. Hilburn, PhD, Administrator, Plant Division, Oregon Department of Agriculture

Ellen Honeycutt, President, Georgia Native Plant Society

William R. Jacobi, Professor of Tree Pathology and Extension Specialist, Department of Bioagricultural Sciences and Pest Management, Colorado State University

Bart Jones, President, Tennessee Native Plant Society

Cynthia Maguire, 2011 President, Native Plant Society of Texas

Rick Marsh, President, North American Maple Syrup Council, Inc.

Tom Martin, President and CEO, American Forest Foundation

Joseph J. McCarthy, Senior City Forester, Department of Streets and Sanitation, City of Chicago Bureau of Forestry

Jennifer L. Parke, Associate Professor, Senior Research, Department of Botany and Plant Pathology, Oregon State University

Anand Persad, Regional Technical Advisor, The Davey Institute

Ken Rauscher, National Plant Board, Retired

Ann Redmond, President, Florida Native Plant Society

Christopher Reid, President, Louisiana Native Plant Society

Clifford S. Sadof, Professor, Department of Entomology, Purdue University

Lin Schmale, Senior Director - Government Relations, Society of American Florists

Bruce Scholnick, President/CEO, National Wooden Pallet and Container Association

Carl Schulze, President, National Plant Board

Tom Searles, President, American Lumber Standards Committee

Douglas Still, President, Society of Municipal Arborists

Dr. Steve Yaninek, Professor and Head, Department of Entomology, Purdue University

Attachment: Information on Individual Species

Emerald Ash Borer

- While the emerald ash borer already infests a large area in the United States and a significant proportion of vulnerable hardwood forests in Canada, extremely large areas of natural ash woodlands and even more significant urban plantings remain outside the current infested area. It is important to prevent artificial spread of EAB to these areas. Adoption of the proposed rule will supplement existing APHIS regulations, which seek to prevent EAB spread through the domestic movement of wood packaging, firewood, and nursery stock.

- Urban areas with significant numbers of ash trees will suffer extremely expensive removal and replacement costs as well as loss of valuable ecosystem services if EAB reaches them. The Initial Regulatory Flexibility Analysis cited the estimate by Kovacs *et al.* (2009) of treatment or removal/replacement costs totaling $10.7 billion in a suite of urban areas now at risk to the EAB. It should be noted that this estimate nearly doubles when one includes developed land outside urban communities that meet the definition used by the Bureau of the Census.

- As significant as these costs are, they should be considered underestimates, for the following reasons:
    - Kovacs *et al.* 2009 did not include urban areas in the Plains states, which were beyond the predicted area of spread utilizing the model applied in the study.
        - According to the state assessment of forest resources,[4] Kansas has an estimated 56.1 million green and white ash in its rural and urban landscapes, of which 1.5 million ash trees occur in towns and cities.
        - According to the state assessment of forest resources,[5] Nebraska has an estimated 44 million ash trees in communities, agroforestry plantings and native woodlands. Municipal costs to remove, dispose and replace more than 1.01 million community ash trees will exceed $1 billion.
        - According to the state assessment of forest resources,[6] tree species commonly present in North Dakota's residential communities include cultivars of elm (*Ulmus* spp.), linden (*Tilia* spp.), ash (*Fraxinus* spp.), oak (*Quercus* spp.), hackberry (*Celtis occidentalis*) and silver maple (*Acer saccharinum*).
        - According to the state assessment of forest resources,[7] Oklahoma has an estimated 64 million ash trees, particularly in riparian areas. Ash trees also make up large parts of the urban forests in several cities across Oklahoma.
        - According to the state assessment of forest resources,[8] South Dakota's urban or community trees include a large number of species, with ash, elm, crabapple, and maple being a few of the most common.

[4] Atchison, R., R. Daniels, E. Martinson, M. Stadtlander. 2010. Kansas Forest Forest Resource Assessment and Strategy

[5] Josiah, S.J. Nebraska Statewide Forest Resource Assessment and Strategy. 2010.

[6] Kotchman, L.A. 2010. North Dakota Statewide Assessment of Forest Resources and Forest Resource Strategy

[7] Johnson, E., G. Geissler, D. Murray. 2010. The Oklahoma Forest Resource Assessment

- These trees provide important ecosystem services. The services mentioned most frequently are moderating both summer heat and winter/wind cold – and associated cooling/heating energy costs and carbon footprints. However, the highest value service is reducing storm water runoff – and associated treatment costs. A USDA Forest Service study estimated each green ash street tree in Bismarck, North Dakota provided $19/year in reduced storm water runoff -- $100,000 city wide.[9]
- Ash constitute important components of natural systems in the Plains states, as well.
  - In South Dakota, bottomland (riparian) forests, consisting primarily of cottonwood, willow, green ash, and elm, provide tremendous value in improving water quality and flood control.
  - Rumble and Gobeille (1998)[10] found that riparian woodlands in South Dakota had an importance disproportionate to their (tiny) size by increasing vegetation structure and thus supporting a richer bird community than grasslands. These woodlands also support human recreation and woodcutting.
- Ash constitute important components of agricultural systems.
  - In South Dakota, green ash make up more than 50% of shelterbelts (Chris Johnson, pers. com.). Removal costs for shelterbelt trees are less than for urban trees.
- Ash are also important in the South.
  - According to Steve Meadows, USFS, in the mixed hardwood forests in southern bottomlands & loessial hills of Arkansas, Louisiana, and Mississippi, ash constitute about 3.5% of standing hardwood sawtimber; in the Mississippi Delta, it approaches 8%. Ash is more valuable them elm, sugarberry, or bitter pecan.
  - Kovacs and colleagues, continuing their analysis of costs associated with EAB spread, showed the geographic area which would benefit the most from successful programs to prevent spread of EAB is the South.
  - According to the state assessments of forest resources, green ash is widely used as a street tree in both Georgia[11] and North Carolina.[12]
  - Again according to the state assessment of forest resources,[13] green ash is a common riparian tree in the piedmont and on the largest coastal plain rivers in North Carolina. Rapid mortality of green ash could have significant water quality implications.

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[8] Hocking, C.M. & E.L. Kranz. 2010. South Dakota Statewide Assessment of Forest Resources

[9] Zeleznek, J. 2008. Economic impact of emerald ash borer on North Dakota communities. City*Scan* 2008

[10] Mark A. Rumble, John E. Gobeille. 2006. Bird Community Relationships to Succession in Green Ash (Fraxinus pennsylvanica) Woodlands. BioOne Volume 140, Issue 2 (October 1998) US Forest Service, Rocky Mountain Research Station, Center for Great Plains Ecosystem Research

[11] Georgia Forestry Commission. 2010. Georgia Statewide Assessment of Forest Resources

[12] North Carolina Division of Forest Resources. 2010. North Carolina's Forest Resources Assessment. A statewide analysis of the past, current, and projected future conditions of North Carolina's forest resources

[13] North Carolina Division of Forest Resources. 2010.

- Ash trees are also widely planted in urban areas in the West. The foliage of "modesto" ash (*Fraxinus velutina*) is fed to emerald ash borers being reared in the laboratory during winter in the Midwest -– so the tree is clearly vulnerable to the pest.
- Kovacs *et al.* 2009 explicitly did not analyze the effects of long distance dispersal of EAB caused by humans. They stated, "To the extent that the establishment of outlier EAB populations increases the rate at which counties become infested, our model underestimates the progression of spread and the discounted cost of treatment, removal, and replacement."

As part of our analysis, we sought assistance from Dr. Frank Koch, Research Assistant Professor Department of Forestry and Environmental Resources, North Carolina State University and cooperator with the USDA FS Eastern Forest Environmental Threat Assessment Center. Dr. Koch analyzed data from version 3.1 of the Freight Analysis Framework, which is based on flows of various commodities in 2007. This analysis, which we can provide, found that the following cities highly vulnerable to the emerald ash borer received significant quantities of wood packaging from Canada. In our submission, we have excluded data for the distinct commodity category "wood products" because a significant proportion of that category is not composed of wood packaging. Consequently, this submission represents a probable underestimate of the quantities of potentially pest-infested wood packaging material received by these cities.

City	Quantity of Wood Packaging Received From Canada in 2007
Dallas/Fort Worth	51.4 kilotons
Portland, OR	27.8 kilotons
Nashville, TN	27 kilotons
Omaha	15 kilotons
Memphis	15 kilotons
San Antonio	11.7 kilotons
Fargo	9.9 kilotons
Witchita	9 kilotons
Austin	9 kilotons
Lincoln	9 kilotons

Sirex woodwasp

- The southern pine wood products industry might be severely damaged if the Sirex woodwasp (*Sirex noctilio*) is introduced there. All important softwood timber trees of the region are vulnerable to the woodwasp. According to a study by the USDA Forest Service (cited in the Initial Regulatory Flexibility Analysis), if the woodwasp spreads across the entire southern pine region, the resulting damage could reach $11 billion.
- Less often noted is that the same study showed that damage to the pine timber industry in other parts of the country could reach $6 billion.
- At least 6 states in the southern pine region listed the *Sirex* woodwasp as a threat to forest health in the region. South Carolina called it one of the three highest threats.[14]

[14] Anon. Virginia Statewide Assessment of Forest Resources. A Comprehensive Analysis of Forest Conditions, Trends, Threats and Priorities; Casey, L. 2010. Forests at the Crossroads. Alabama's Forest Assessment and Resource Strategy; Georgia Forestry Commission. 2010. Georgia Statewide Assessment of Forest Resources; Maryland Department of Natural Resources. 2010. Maryland Forest Resource Assessment; North Carolina Division of Forest Resources. 2010.

- Jack pine populations in the upper Midwest also could be impacted.

As noted above, Dr. Koch's analysis found that the following cities highly vulnerable to the *Sirex* woodwasp received significant quantities of wood packaging from Canada. Again, we have excluded data for the distinct commodity category "wood products", so this submission represents a probable underestimate of the quantities of potentially pest-infested wood packaging material received by these cities.

City	Quantity of Wood Packaging Received From Canada in 2007
Dallas/Fort Worth	51.4 kilotons
Houston	49 kilotons
Atlanta	48.8 kilotons
Birmingham	16 kilotons
Charlotte	15.6 kilotons
Little Rock	15.4 kilotons
Columbia, SC	12.7 kilotons
Tampa/St. Petersburg	10 kilotons
Jackson, MS	9.7 kilotons
Montgomery, AL	9.5 kilotons

Brown spruce longhorned beetle

The brown spruce longhorned beetle is established in a part of Nova Scotia (CFIA website accessed December 2010). Research into the risk of spread indicates that the insect could be transported in roundwood.[15] The principal host in Canada is red spruce. The United States has significant red spruce populations reaching from New England south along the Appalachian Mountains. Red spruce is particularly important to maintaining some coniferous component of the high-elevation forests of the southern Appalachians since the co-dominant Fraser fir is already largely gone (at least as mature trees) as a result of attack by another invasive insect (balsam woolly adelgid).

North Carolina's Forest Resources Assessment. A statewide analysis of the past, current, and projected future conditions of North Carolina's forest resources; Kodama, H.E.2010. South Carolina's Statewide Forest Resource Assessment and Strategy

[15] Sweeney, J., P. Silk, D. Pureswaran, L. Flaherty, J. Wu, J. Price, J.M. Gutowski, and P. Mayo. 2009. Research Update on the Brown Spruce Longhorn Beetle, Tetropium fuscum (Fabr.) 2009 USDA Research Forum on Invasive Species