

The Big Picture

Adapted from the Invasive Species Pathways Team Final Report 2003.

Pathways of Invasive Plants

TRANSPORTATION People and Goods	LIVING INDUSTRIES Live Plants and Animals	MISCELLANEOUS
<p>Modes</p> <p>In today’s world we travel by air, water, and land. When we use transportation to get either ourselves or our belongings somewhere else, we can unknowingly transport plant material.</p> <p>Anytime something is transported, “hitchhikers” can come along for the ride. Ships, airplanes, and trains may harbor plant material in their cargo. Construction, wildland firefighting, and recreational equipment may carry material from one place to another. Even our pets, shoes, and clothing can accidentally transport seeds to new places.</p>	<p>Food</p> <p>Next time you purchase live seafood, look closely at what else is in the package. Invasive aquatic plants may be lurking in the water, food, or packing materials.</p> <p>When plants are imported into and throughout the country as food, they too may contain invasive plant material in their packaging or attached to the food itself.</p>	<p>Aquatic</p> <p>An additional aquatic pathway includes the transportation of invasive plants via water in interconnected waterways such as lakes, canals, or aqueducts.</p>
<p>Shipping Materials</p> <p>Plant materials are often used to protect and pad shipped goods. Plant seeds can hitchhike on the containers used for shipping as well.</p> <p>Wood pallets and crates may contain plant seeds. After containers are unpacked, the seeds may be inadvertently discarded and may wind up in locations where they can</p>	<p>Non-food</p> <p>Aquaculture is another pathway for the introduction of invasive aquatic plants. These plants might be found in the shipping medium when items are transported to other aquaculture facilities and then placed into rearing pens in rivers and the ocean.</p> <p>Aquatic plants are commonly used in the</p>	<p>Ecosystem Disturbance</p> <p>A disturbance to the ecosystem may facilitate the movement and establishment of invasive plants. While some disturbances are natural (fire, flood, and tornados for example), many others are caused by humans.</p> <p>Highways, railroads, and roads create disturbed soil conditions along corridors</p>

Volunteers and Invasive Plants—Learning and Lending a Hand

<p>grow.</p> <p>Sand and earth are sometimes used in archaeological shipments and can contain seeds if not properly cleaned.</p>	<p>aquarium business. Sometimes these plants end up in waterways when people dump them into lakes and rivers.</p>	<p>that enhance the spread of invasive plants. Land clearing, development, damming, stream channelization, logging, and other habitat modifications also can enable the spread of invasive plants.</p>
<p>Travel</p> <p>People travel for leisure, recreation, and business. In the process they may accidentally “pack” unwanted plant material.</p> <p>When people move to a new home, they make take their favorite plants and replant them in the new environment.</p> <p>People may transport animals such as pets, livestock, or show horses that could be carrying seeds.</p> <p>Avid gardeners may inadvertently help in the spread by transporting plants and clippings to garden shows and by giving them to friends.</p>	<p>Plant Trade</p> <p>Plants that are deliberately introduced as ornamentals may escape and become invasive. Botanical gardens, nurseries, landscaping facilities, aquariums, and water garden facilities all import plants to enhance the landscape and to meet customer demand.</p> <p>Plants may be imported wholly, as seeds, as bulbs, as cuttings, or as aquatic propagules.</p>	<p>Natural Spread</p> <p>Just like their native counterparts, established invasive plants reproduce and spread when environmental conditions are right.</p>
<p>Mail Order</p> <p>Consumers may order plants from other areas on the Internet or by phone. These plants may be invasive in the new environment. Quick shipping times (a day or two) facilitates the movement of live plants.</p>		