

# PLANT INSPECTION WITH SPECIAL REFERENCE TO DOCK ROUTINE

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The continual growth in trade between Canada, the Orient, the various nations of the British Commonwealth, and our neighbor to the South cannot help but emphasize the increasing importance of Vancouver as a port of importation and exportation. This situation cannot but react correspondingly on the plant inspection activities at this port.

## II. Origin of Incoming Vessels

The merchant marine of all nations is well represented at the port of Vancouver. Most of our nursery stock arrives on the Dutch boats (bulbs, ornamentals, and herbaceous roots), Japanese, (ornamentals and bulbs), together with a small amount of stock on the English, German, French and Australian vessels. Plant products are likely to arrive on boats of any nations.

## III. Inspection Routine

**A. General.** The inspectors attend all incoming vessels, and special attention is paid to those carrying passengers. With an officer of the Plant Inspection Service in attendance while the passengers' baggage is being examined, the customs examiner co-operates with this officer by drawing to his notice any baggage that may contain plants or plant products, subject to examination by our Department. At the same time the inspector is on the alert to see that nothing of this nature is overlooked.

**B. Specific—Oriental Vessel Inspection.** On arrival of a boat of this class.

a. Inspection of white passengers' baggage is first undertaken, when all inspections made are duly recorded and data supplied to the office for further action if necessary.

b. When a lull in the above procedure allows it, a visit is paid to the lower customs office to examine the express manifest in order to discover anything thereon that might require immediate action.

c. The examination of the baggage of the overland Oriental passengers is attended to next, as these people usually entrain shortly after the boats arrive.

d. The local Oriental baggage is now surveyed and this procedure

usually takes considerable time owing to its diverse nature, and the fact that these persons straggle along in small numbers, unlike the white passengers who normally attend in a body. It is in this baggage that most of the more important interceptions are made.

e. On completion of the above, attention is now concentrated on freight shipments.

1. Shipments destined for Eastern Canadian points are checked as to permits (if nursery stock), names and addresses of consignors, consignees, marks, number of cases and route of dispatch, which information is handed on to the office for furtherance to our head office at Ottawa. From that point advices are sent out to the plant inspection office concerned.

2. Local freight shipments are examined at the dock or at the consignee's premises as the circumstances demand. If the results of the examinations are satisfactory, the appropriate certificates in the case of nursery stock are issued by the office. No documents are issued in the case of plant products. Should infection or infestation be found in these shipments, depending on the circumstances, they are ordered to be returned to the shipper, fumigated, or destroyed in the presence of a customs officer and an inspector of this department.

#### IV. Phases of the Work Other Than Inspection

##### A. Unusual Interceptions

During the years 1935 and 1936 a survey was made of various types of containers and packing materials, the results of which are quite interesting from an entomological point of view.

Host	Insect Pest
a. Willow, ash and birch crates from England	1. <i>Scolytus intricatus</i> -Ratz, which is congeneric with two European species of insects known to transmit the Dutch elm disease.
	2. <i>Leperisinus fraxini</i> -Panz.
b. Rice straw packing from Japan	1. <i>Pyraustids</i> , closely related to the corn borer.
	2. <i>Tribolium confusum</i> -Duval.
	3. <i>Tinea pellionella</i> -Linn.
	4. Species of mites, which prove very irritating to the hands of packers.

- c. Rum from Jamaica   Mites on outside of leaking barrels.

**B. Forwarding of Transshipments of Parasites**

From time to time shipments of beneficial parasites are forwarded from the entomological departments of Japan, etc., to the Dominion Parasite Laboratory at Belleville, Ontario. A consignment of considerable interest was one of corn borer larvae parasitized with *Trichogramma minutum*, (Riley and Sen) from Japan to the Belleville Laboratory. These larvae had to be removed from their original containers and repacked in a special ice box before being forwarded to their eastern destination. At other times such shipments are considerably facilitated by the inspector attending to small details between boat and train.

**C. Isolation and Treatment of Dock Areas on Which Either Infested or Prohibited Plant Materials are Quarantined**

An interesting illustration of this type of inspection service presented itself in 1931, when a large consignment of low protein wheat from Australia (3730 sacks) was loaded on the dock at Vancouver, B.C.

As the documents covering this shipment did not contain the certificate from the proper authorities in Australia, stating it to be from an area free from flag smut of wheat (*Urocystis tritici-Koernicke*) it was refused entry under Dominion regulation No. 18 (Foreign) (1st Revision). Meanwhile the vessel bringing the wheat had to discharge same owing to outgoing cargo requirements. The wheat was placed on, and covered with, tarpaulins and treated with piralin. After a lapse of fourteen days it was re-shipped to Japan.

**D. Inspection of Exports in Bulk at Dockside**

There was a considerable amount of this work during the recent maritime workers' strike on the Pacific coast, when large consignments of onions, potatoes, and root crops were exported to the Hawaiian Islands as supplies from the United States were not available.

**V. Insect Pests and Plant Diseases Intercepted**

- a. On passengers' baggage :-

Too much emphasis cannot be placed on this phase of our work, the truth of which is demonstrated by the list appended below of the interceptions made in passengers' baggage during the present fiscal year.

Host	Subject of Interception
Chinese mandarin oranges	Lepidosaphes gloveri Packard Parlatoria pergandii Comstock Paralatoria zizyphus Lucas Pseudomonas citri Hasse
Vaccinium ovatum sprays	An unidentified leaf miner, not recorded, to the best of my knowledge, on the Pacific coast.
Japanese Cherry trees	Aspidiotus forbesi Johnson Aspidiotus ostreaeformis Curtis
Malus	Aspidiotus perniciosus Comstock
Juniper	Eriophyes ramosus Hodgkins
Sand pears	Laspyresia molesta Busck
Gladioli	Taeniothrips gladioli (M. & S.)
Apples	Carpocapsa pomonella Linn
Corn	Heliothis obsoleta Fabr
Sweet Potatoes	Cylas formicarius Fabr
Pineapples	Pseudococcus longispinosus Targioni
Camellia	Diaspis camelliae

**b. Freight Interceptions.**

Host	Insect Pest or Disease
1. Stored grain	Sititroga cerealella Olivier Ephestia kuehniella Zeller Tribolium confusum Duval Tenebroides mauritanicus Linn Necrobia rufipes De Geer Mylabris obtectus Say
2. Nuts	Balaninus rectus Say Plodia interpunctella Say
3. Vegetables—Spinach & Celery Corn Tomato	Heterodera Marioni Goodey Heliothis obsoleta Fabr Gnorishema lycopersicella Busck

4.	Fruit—Apples Pears Citrus Fruits	Carpocapsa pomonella Linn Chrysomphalus aurantii Maskell Coccus pseudomagnoliarum- Kuwana
5.	Bulbs	Anguillulina dipsaci Kuhn Pseudomonas hyacinthi Wakker Merodon equestris Fabr Eumerus strigatus Fallen Rhizoglyphus hyacinthi Boisd Rhizopus necans Masee Septoria gladioli Passer Pseudomonas marginata McCulloch

**c. Nursery Stock and Plant Products Refused Entry  
Under Departmental Regulations**

Several ornamental dish plantings containing Japanese soil.	
Five leaved pinus	Japan
Wheat	Australia
Mango fruits	Hawaii
Papaya	"
Anthurium flowers	"
Mauna Loa blossoms	"
Frangipani blossoms	"
Gardenia	"
Ti tree logs and leaves	"
Strelitzia reginae plants	"
"Wood rose" flowers (dried)	"

**Bibliography**

1. Manual of Plant Diseases—F. D. Heald,  
McGraw-Hill Book Co., New York
2. Insects of Western North America—E. O. Essig,  
The MacMillan Co. New York
3. Destructive and Useful Insects—C. C. Metcalf and W. P. Flint,  
McGraw-Hill Book Co., New York
4. An Introduction to Entomology—J. H. Comstock,  
Comstock Publishing Co., Ithaca, N.Y.
5. Department Records, Plant Inspection Office, Vancouver.