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ced, so d with by the voyageurs épinette, and which is probably a spruce. To this thread the term wattap, used by the Chippewas, is applied by the Canadians; the seams as well as the cracks are covered with pitch (called by the Chippewas peke) made of the gum of the épinette; this is applied hot and renders the canoe water-tight. In this manner a little vessel is obtained, very well calculated for travelling on these waters, as it will carry a burden of upwards of 3,000 pounds. . . . Those which we used were 30 feet long by about 4 feet wide in the middle, and perhaps 30 inches deep. A number of transverse bars serve to keep the canoe in its proper shape. The seats of the paddlers are suspended to the gunwale. The bow and stern are sharp and turned upward."

How these canoes were navigated on all sorts of waterways, large and small, deep and shallow, is very well described by Peter Grant, of the North-West Company, in one of the narratives included in

Masson's Bourgeois de la Compagnie du Nord-ouest:

"When arrived at a portage, the bowman instantly jumps in the water, to prevent the canoe from touching the bottom, while the others tie their slings to the packages in the canoe and swing them on their backs to carry over the portage. The bowman and steersman carry their canoe, a duty from which the middlemen are exempt. The whole is conducted with astonishing expedition, a necessary consequence of the enthusiasm which always accompanies their long and perilous voyages.

"It is pleasing to see them, when the weather is calm and serene, paddling in their canoes, singing in chorus their simple melodious strains and keeping exact time with their paddles, which effectually beguiles their labours. When they arrive at a rapid, the guide or foreman's business is to explore the waters previous to their running down with their canoes, and, according to the height of water, they either lighten the canoe by taking out part of the cargo and carry

overland or run down the whole load.

"It would be astonishing to an European observer to witness the dexterity with which they manage their canoes in those dangerous rapids, carrying them down like lightning on the surface of the water. The bowman, supported by the steersman, dexterously avoids the stones and shoals which might touch the canoe and dash it to pieces, to the almost certain destruction of all on board. It often baffles their skill, when the water is very high, to avoid plunging in foaming swells on the very brink of the most tremendous precipices, yet those bold adventurers rather run this risk, for the sake of expedition, than lose a few hours by transporting the cargo overland.

"When they are obliged to stem the current in strong rapids, they haul up the canoe with a line, all hands pulling alongshore and some-