

CROOKED RIVER FISHERIES AND WILDLIFE

The Crooked River with its variety of riparian habitat is essentially a headwaters system originating in Summit Lake on the Arctic Divide. As such it lacks many of the moderating and more productive features of other meandering river systems. Features such as rich nutrient loads carried by other rivers of greater length, more moderate climate of valleys at lower elevations and different aspect with relation to prevailing weather systems are benefits lacking in the Crooked River system. When compared to other local river systems the Crooked River is indeed a productive fish stream for an arctic drainage watershed, but it is a poor sports fishery due to the abundance of coarse fish thriving here.

FISHERIES

The Crooked River is relatively slow moving as it loses relatively little elevation between Summit Lake and McLeod Lake, some forty canoe miles to the North. It is a shallow stream with wide pool areas some of which are actually lakes, such as Davie, Redrock and Kerry Lake. Aquatic vegetation is very abundant and the poor drainage creates many swamps and marshes that serve as solar heat traps to encourage productivity. Many spring also contribute to the river, the largest is called Livingstone Springs.

A variety of fish species are found in the system and the many habitats available allow them to coexist without domination by any one species. Three species of sucker and squawfish are perhaps the most successful and adaptable species in the Crooked River system. Chub and Whitefish (Rocky Mountain) are also common. Sculpins are found throughout the system. Rainbow trout and Dolly Varden while not common are the major sportfish sought by the river angler.

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Fisheries authorities indicate rainbow to one pound and Dollies to five pounds are as large as these species grow in these waters. The sizes of rainbow most commonly caught by fly-fishing and spin-casting anglers are in the eight to ten inch range.

The lakes of the system contain burbot, lake char and lake whitefish as well as the previously mentioned species. These species prefer the deep waters of the lake depressions to the river shallows.

Within the river, coarse fish predominate to the detriment of sports fishery. Fisheries management investigations have shown that the Crooked River system is virtually a write-off for enhancement potential. The policy of the Fisheries staff will be to direct their efforts elsewhere with regard to enhancement. It is expected that the present fishery will retain itself indefinitely under present use by anglers but increased pressure will harm the sportfish population in the future.

WILDLIFE

Observations of wildlife along the Crooked River have been extensive but few have been recorded as reference material. The Provincial Parks personnel have compiled a bird list for Crooked River Park that includes a twenty five mile radius of the Park. That list is as follows:

COMMON LOON	CANADA GOOSE
RED-NECKED GREBE	MALLARD
COMMON GOLDENEYE	BLUE-WINGED TEAL
BUFFLEHEAD	CANVASBACK
RED-BREASTED MERGANSER	RING-NECKED DUCK
BARROWS, GOLDENEYE	GREAT BLUE HERON
BLACK TERN	AMERICAN BITTERN
BONAPARTES GULL	SOLITARY SANDPIPER
MEW GULL	SPOTTED SANDPIPER
WHITE-WINGED SCOTER	COMMON SNIPE
LESSER SCAUP	LESSER YELLOWLEGS
MARSH HAWK	SHORT-EARED OWL
RED-TAILED HAWK	BARRED OWL
BALD EAGLE	GREAT HORNED OWL

OSPREY
 MERLIN
 KESTRAL
 SHARP-SHINNED HAWK
 COMMON NIGHTHAWK
 RUFUS HUMMINGBIRD
 BELTED KINGFISHER
 STELLARS JAY
 GREY JAY
 RAVEN
 COMMON CROW
 LEAST FLYCATCHER
 WESTERN FLYCATCHER
 OLIVE-SIDED FLYCATCHER
 WESTERN WOOD PEEWEE
 BARN SWALLOW
 CLIFF SWALLOW
 VIOLET GREEN SWALLOW
 TREE SWALLOW
 BANK SWALLOW
 ROUGH-WINGED SWALLOW
 ROBIN
 VARIED THRUSH
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 VEERY
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 WHITE-CROWNED SPARROW

SPRUCE GROUSE
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 NORTHERN 3-TOED WOODPECKER
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 ROCK DOVE
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 BLACK-BILLED MAGPIE
 RUSTY BLACKBIRD
 RED-WINGED BLACKBIRD
 BREWERS BLACKBIRD
 BROWN-HEADED COWBIRD
 STARLING
 BLACK-CAPPED CHICKADEE
 RED-BREASTED NUTHATCH
 DIPPER
 MOUNTAIN BLUEBIRD
 CEDAR WAXWING

 RUBY-CROWNED KINGLET
 GOLDEN-CROWNED KINGLET
 AMERICAN REDSTART
 WESTERN TANAGER
 EVENING GROSBEAK
 PURPLE FINCH
 WHITE-WINGED CROSSBILL
 RED CROSSBILL
 PINE GROSBEAK
 NORTHERN WATERTHRUSH
 YELLOWTHROAT
 PINE SISKIN
 JUNCO
 MOUNTAIN CHICKADEE

SONG SPARROW

RED-EYED VIREO

CHIPPING SPARROW

WARBLING VIREO

The one hundred and five species listed are obviously incomplete since the valley represents a north-south flyway over a low part of the Arctic Divide. During an early July canoe trip in heavy rain the following birds were observed. Varied Thrush, Common Merganser, Shoveller, Mallard, Goldeneye, Herring Gull, Red-Tail Hawk, Bald Eagle, Golden Eagle, Osprey, Kingfisher, Dipper, Grey Jay, Stellars Jay, Raven, Barn Swallow, Tree Swallow, Robin, Spotted Sandpiper, Flicker, Hairy Woodpecker, Northern Three-Toed Woodpecker, Red-Winged Blackbird, American Redstart, Yellow-Rumped Warbler, Yellow Warbler, Tree Sparrow, Song Sparrow, Ruby-Crowned Kinglet, Junco, Northern Waterthrush and Blackpoll Warblers.

During a helicopter survey on January 19th a total of seventy-one Trumpeter Swans were recorded on the Crooked River of which seventeen were cygnets (young of the year). Bufflehead and Goldeneye were also observed as were Dippers and Grey Jays. Stellars Jays were seen at Summit Lake and Common Redpolls and White-Winged Crossbills were gravelling up on the highway at Bear Lake.

The Riparian habitat along the Crooked River and the lake shores contains excellent bird habitat and thus offers the quiet water traveller a wonderful opportunity for bird watching.

Reptiles and amphibians were not observed during our canoe trip. Park records include the striped garter snake and two amphibians, the northwestern toad and the yellow tree toad.

Mammals observed in the Crooked River Park are mink, mule deer, moose, wandering shrew, deer mouse, flying squirrel, red squirrel, black bear, grizzly bear, lynx, coyote, red fox, wolf, northwestern chipmunk, river otter, beaver, and muskrat. During our canoe trip only a muskrat was observed swimming along the river shoreline.

The winter helicopter survey recorded eighteen bull moose, thirty two cow moose and fourteen calves wintering along the Crooked River. Tracks of three wolves were also observed.

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Wildlife habitat varies along the river length from Summit Lake to McLeod Lake. Waterfowl habitat is concentrated in the marshy open areas where the river meanders and spreads into the brushy margins where small sloughs or pothole lakes are found. Passerine birds favour the thick willow and alder thickets in the same areas. Insect-eating birds utilize the air above the river as their feeding areas.

In the winter open water areas supply trumpeter swans with both food and protection as they feed on the aquatic plants available on the stream bottom. Springs help to keep stretches of the river open. Other diving ducks and water ouzels also take advantage of the open water in winter. The river from La Pas road bridge downstream to Davie Lake offered the best habitat for swans in January 1983.

Moose utilize the river edges in winter particularly from Davie Lake to Redrocky Lake. The river ice also forms a travel route for the moose, as they feed on the willows of the shoreline. In the spring, usually Mid-May to Mid-June, cow moose use the wet areas along the stream as a buffer to protect against predators when they give birth to their young. Mineral licks attractive to moose exist at Livingstone Springs, and elsewhere along the river.

The beaver cuttings and sign was extensive along the river and it is obvious that a substantial population exists along the Crooked River. Muskrat habitat in marshes and wide areas of the river likely support a viable population as well.

Enhancement of the wildlife habitats would best be served by protecting the areas adjacent to the river environs from logging or other forms of disruption such as land clearing or road building. The mosaic or mix of habitats along the Crooked River is best maintained as it is in perpetuity for the benefit of the species currently dependent upon it.

Grant Hazelwood

Reference - Flora and Fauna Report - Crooked River by B.Herrin, 1969
updated by B. Schnider, 1974

CROOKED RIVER PROJECT REPORT

January 1983

Project Chairman: Steve Head
Co-Chairman : Grant Hazelwood

OUTLINE OF PURPOSE

The original project idea was put forth by Terry Wells, B.C. Forest Service Recreation Officer.

It consisted of three major sections; all aimed at improving the recreational use of the Crooked River and it's adjoining corridor.

- a) Clear deadheads, log jams, sweepers and other debris from the main channel to facilitate better canoe and boat passage.
- b) Collect information on geographic features, historic sites, and wildlife populations of general interest.
- c) Locate possible future sites for campsites, launches, access points and verify existing map features. Some minor amount of signing was to be done regarding existing public use areas.

GEOGRAPHY

The Crooked River rises in the Arctic watershed out of Summit Lake, 27 miles north of Prince George. It flows northwards for approximately 72 river miles to its termination in the Parsnip Arm of Lake Williston. Over this course it passes through five major lakes; Davie, Redrocky, Kerry, McLeod, and Tudhay.

The river is slow and meandering and of a moderate size and gentle nature. It is bordered by extensive areas of willow/alder brush, backed with lodgepole pine, white spruce, and balsam fir.

HISTORY

The river was an important link in the fur trade between New Caledonia and Eastern Canada. Simon Fraser travelled the river on his second trip in to New Caledonia in 1805. Traders, trappers and travellers used the waterway as a main highway until well into the twentieth century. The Provincial Department of Highways maintained slashing crews on the river during the Second World War. The completion of the John Hart in the early 1950's saw the end of the commercial river travel.

HISTORY cont'd

There are many man made features still visable along the river. They depict numerous decades of past use. Mouldering trapper's cabin's are dotted along the route with one site having been in use from the Mid 1800's.

At least two areas are identifiabile as regular stopping places ranging back in time to the early fur trading days, Only one perm-
anent resident remains on the river today.

Still visable, but quickly disappearing are the well known "Wagon Roads" . Early travellers found the numerous shallow riffles of the river to be a great obstructionto their boats. Both upstream and downstream movement was hindered.

The solution was simple yet backbreaking . Using hand tools or hands themselves, a narrow channel was dredged through the riffle. All of the loose rock was piled on the shallow side of this chute, which created a low wall of gravel. As the channel was built in the main current, the river surged through at a goodly rate of speed. Wagon roads varied in size from 100to 300ft. in length and from 5 to 10 feet in width.

To ride down one of these is similar to riding a "shoot-the-chute". One simply lines up the channel and flies down the little cascade with the rock sides only inches from the vessel and at eye level to the canoeist. As there is not enough width or depth to ply a paddle, you simply ride along at the whim of the river.

RECREATION

The Crooked River is an ideal stream for the beginning canoeist. Except for the extreme danger of high water in the spring, the river is of a low key nature of slow current with scattered, small riffles. The scenery is gentle and peaceful.

Birds and wildlife are moderately abundant, giving many opportunities for the photographer. Sport fishing is fair quality, an ideal piece of water for the fly fisher.

Access to the river is available at many points along it's entire course. Highway 97 North follows the waterway for its entire length and four major logging roads cross the river. Undeveloped stopping places are scattered down the route and the B.C. Forest Service have camp sites available at five locations.

SCWA PROJECT

Initial work began in early July. Six canoes started from a point approximately seven miles downstream of Summit Lake. The upper end

SCWA PROJECT cont'd

of the river had already been patrolled by a resident of Summit Lake, FLOYD CRAWLEY.

The SCWA crew spent 1½ days traveling to Davie Lake. They removed small log jams, sweepers and overhanging brush from the channel. A number of BCFS signs were posted, for public information at camping areas.

Later in the summer, another group of members travelled the river from Davie Lake North to a point just past Kerry Lake. They found little to impede water travel. One potential campsite was located downstream of Davie Lake. It is not recommended as a priority development due to its nature. The site is a Spruce/ Balsam stand, in close proximity to a large area of willow slough.

RECOMMENDATIONS

- 1) Further survey and channel clearing be carried out in 1983. Thereafter on an as-needed-basis.
- 2) Minimal site development, as there are already enough formal sites available.
- 3) Information on access and recreation opportunities be available to the public.
- 4) Location and recording of historical features be attempted.
- 5) Preservation of the immediate water corridor in it's present state.
- 6) Some facility improvement at major access sites.



Enclosures: Route Maps
Wildlife Report

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FISHERIES

The Crooked River is relatively slow moving as it loses relatively little elevation between Summit Lake and McLeod Lake, some sixty-two canoe miles to the North. It is a shallow stream with wide pool areas some of which are actually lakes, such as Davie, Redrocky and Kerry Lake. Aquatic vegetation is very abundant and the poor drainage creates many swamps and marshes that serve as solar heat traps to encourage productivity. Many springs also contribute to the river, the largest is called Livingstone Springs.

A variety of fish species are found in the system and the many habitats available allow them to coexist without domination by any one species. Three species of sucker and squawfish are perhaps the most successful and adaptable species in the Crooked River system. Chub and Whitefish (Rocky Mountain) are also common. Sculpins and red side shiners are found throughout the system. Rainbow trout and Dolly Varden while not common are the major sports fish sought by the river angler.

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WHITE-WINGED SCOTER
LESSER SCAUP
MARSH HAWK

CANADA GOOSE
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CANVASBACK
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STELLARS JAY	NORTHERN 3-TOED WOODPECKER
GREY JAY	RED-BREASTED SAPSUCKER
RAVEN	ROCK DOVE
COMMON CROW	MOURNING DOVE
LEAST FLYCATCHER	BLACK-BILLED MAGPIE
WESTERN FLYCATCHER	RUSTY BLACKBIRD
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WOOD THRUSH	WESTERN Tanager
ORANGE-CROWNED WARBLER	EVENING GROSBEAK
MAGNOLIA WARBLER	PURPLE FINCH
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WILSON'S WARBLER	PINE SISKIN
LINCOLN'S SPARROW	JUNCO
WHITE-CROWNED SPARROW	MOUNTAIN CHICKADEE
SONG SPARROW	RED-EYED VIREO
CHIPPING SPARROW	WARBLING VIREO

The 105 species listed for Crooked River Park are obviously incomplete since the valley represents a north-south flyway over a low part of the Arctic Divide. During an early July canoe trip in heavy rain the following birds were observed: VARIED THRUSH, COMMON MERGANSER, CANVASBACK DUCK, BLUE-WINGED TEAL (7 immature), MALLARD,

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GOLDENEYE, HERRING GULL, RED-TAILED HAWK, KESTRAL, BALD EAGLE, GOLDEN EAGLE, OSPREY, KINGFISHER, DIPPER, GREY JAY, STELLARS JAY, RAVEN, RUFUS HUMMINGBIRD, BARN SWALLOW, TREE SWALLOW, ROBIN, HERMIT THRUSH, SPOTTED SANDPIPER, FLICKER, HAIRY WOODPECKER, NORTHERN THREE-TOED WOODPECKER, YELLOW BELLIED SAPSUCKER, RED-WINGED BLACKBIRD, RUSTY BLACKBIRD, AMERICAN REDSTART, YELLOW-RUMPED WARBLER, BOHEMIAN WAXWING, YELLOW WARBLER, TREESPARROW, SONG SPARROW, WHITE-CROWNED SPARROW, RUBY-CROWNED KINGLET, WESTERN WOOD PEEWEE, JUNCO, NORTHERN WATERTHRUSH, WESTERN Tanager AND BLACKPOLL WARBLER.

During a helicopter survey on January 19th a total of seventy-one Trumpeter Swans were recorded on the Crooked River of which seventeen were cygnets (young of the year). Bufflehead, Goldeneye and mallard were also observed as were Dippers and Grey Jays. Stellars Jays were seen at Summit Lake and Common Redpolls and White-Winged Crossbills were gravelling up on the highway at Bear Lake.

The riparian habitat along the Crooked River and the lake shores contains excellant bird habitat and thus offers the quiet water traveller a wonderful opportunity for bird watching.

Reptiles and amphibians were not observed during our canoe trip. Park records include the Common Garter Snake and amphibians such as the Northwestern Toad, Wood Frog and Spotted Frog.

Mammals reported in Crooked River Park are Mink, Mule Deer, Moose, Wandering Shrew, Meadow Vole, Red-Back Vole, Jumping Mouse, Deermouse, Flying Squirrel, Red Squirrel, Snowshoe Hare, Black Bear, Grizzly Bear, Lynx, Coyote, Red Fox, Wolf, Northwestern Chipmunk, Weasel, Woodchuck, Otter, Fisher, Marten, Beaver and Muskrat. During our canoe trip only a muskrat was observed swimming along the river shoreline.

5.

The winter helicopter survey recorded eighteen bull moose, thirty-two cow moose and fourteen calves wintering along the Crooked River. Tracks of three wolves were also observed.

Again on February 16th 1983 a helicopter survey from Davie Lake to McLeod Lake observed 53 swans (including 2 cygnets), a bald eagle, goldeneye, buffelhead and mallards. The river reach from Davie Lake to Redrocky Lake is a winter moose concentration area with 48 and 32 moose counted on the two winter flights. The two flight totals are not additive as some of the same birds and animals would be recounted. Extensive areas of riparian habitat and old burn areas exist from Kerry Lake to McLeod Lake but very little moose utilization was recorded this winter. It may be used in heavy snow years but it is more likely that the aspen on the burn has outgrown its usefulness to moose in winter.

Wildlife habitat varies along the river length from Summit Lake to McLeod Lake. Waterfowl habitat is concentrated in the marshy open areas where the river meanders and spreads into the brushy margins where small sloughs or pothole lakes are found. Passerine birds favour the thick willow and alder thickets in the same areas. Insect-eating birds utilize the air above the river as their feeding areas.

In the winter, open water areas supply trumpeter swans with both food and protection as they feed on the aquatic plants available on the stream bottom. Springs help to keep stretches of the river open. Other diving ducks and water ouzels also take advantage of the open water in winter. The river from La Pas road bridge downstream to Davie Lake offered the best habitat for swans in January 1983. Ducks and Canada Geese use the islands and wet areas to nest and rear their

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young in the spring and summer.

Moose utilize the river edges in winter as an accessible food source. The river ice also forms a travel route for the moose, as they feed on the willows of the shoreline. In the spring, usually Mid-May to Mid-June, cow moose use the wet areas along the stream as a buffer to protect against predators when they give birth to their young. Mineral licks attractive to moose exist at Livingstone Springs, and elsewhere along the river.

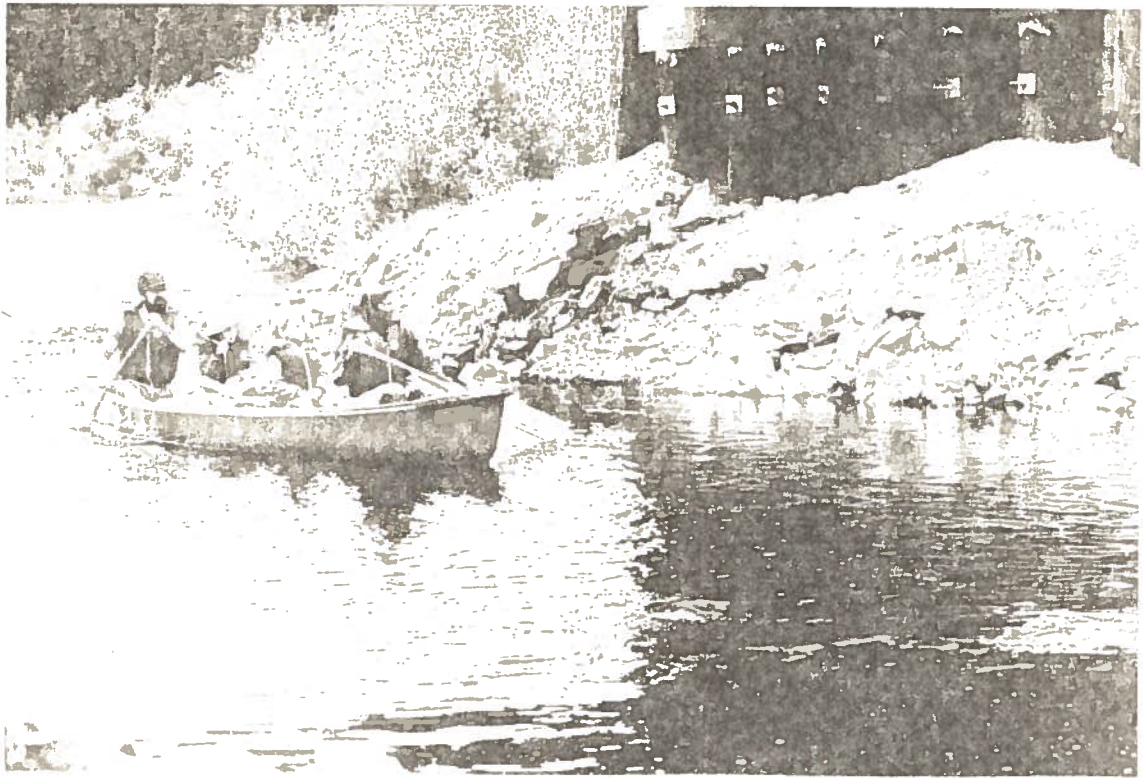
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Enhancement of the wildlife habitats would best be served by protecting the areas adjacent to the river environs from logging or other forms of disruption such as land clearing or road building. The mosaic or mix of habitats along the Crooked River is best maintained as it is in perpetuity for the benefit of the species currently dependent upon it.

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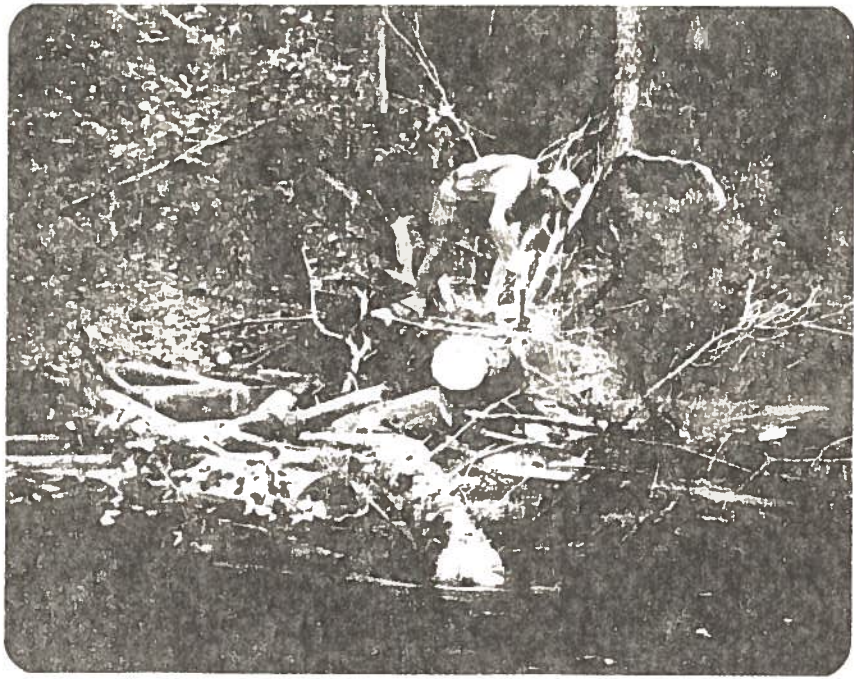
Reference - Flora and Fauna Report - Crooked River by B. Herrin,
1969 updated by B. Schnider, 1974

Crooked River Park - Report on Interpretation 1979
64 pp. by E. van Ingen



One of the easy road across points to cross





Taylor, Florida



Taylor, Florida



View of house



one of the
gentle places
on the river

GRANT + PAT HAZELWOOD
ON THE CROOKED RIVER
JULY 1, 1982

