SOUTHEAST ALASKA

CRAIG, DIXON ENTRANCE, KETCHIKAN
FIELD SUMMARY REPORT

INTRODUCTION

The purpose of this field reconnaisance was to ground truth representative wetland sites in order that photointerpretation could be carried out with accuracy.

MAP NAMES

Craig 1:250,000
6-15' Quads: A-1,2,3
B-1,4
C-4

Dixon Entrance 1:250,000
3-15' Quads: C-1
D-1,2

Ketchikan 1:250,000
5-15' Quads: A-5,6
B-2,3,4

PERSONNEL

Renee Whitehead (Photointerpreter, Martel Laboratories, Inc.)
Johnathon Hall (U.S.F.W.S. Regional Coordinator)

DATE OF FIELD RECONNAISANCE

October 4 to October 7, 1985: Helicopter field check

AERIAL PHOTOGRAPHY

Type: Color Infrared Transparencies
Scale: 1:60,000
1:62,000
1:65,000
Dates: 7/79, 8/79

COLLATERAL DATA

U.S.G.S. Quadrangles
Exploratory Soil Survey of Alaska, U.S.C.S.
Description of the Ecoregions of the U.S., Bailey, Robert G., 1980, U.S. Department of Agriculture.
Glossary of Landscape & Vegetation Ecology For Alaska, Gabriel, Herman W. and Stephen S. Talbot, 1984, U.S. Department of the Interior.

PHYSICAL CHARACTERISTICS

Bailey places the area under study into the category of the Pacific Forest Province. The region consists of the numerous islands of the Alexander Archipelago, along with the mainland east of the St. Elias Mountains. Southeastern Alaska is characterized by the irregular coastlines that are found on the islands and mainland. Hilly moraines border many of the long, narow bays. Muskegs, or bogs, abound in this area, supporting an abundance of sphagnum, sedges, mosses, and shrubs. In these areas, the surface of the land is hummocky and often standing water is present. This is characteristic of much of the area under study in Craig and Dixon Entrance. The mainland appears as a narrow coastal plain bordered by a series of steep, rugged mountains, which is observed in the Ketchikan quadrangles.

The Maritime climate produces temperatures for the area averaging 35°F to 50°F annually. Heavy precipitation throughout the year results in the annual average of 154.01 inches.

Elevation ranges from sea level to altitudes over 5,000 ft. in Southeast Alaska. The timberline, lying between 1,000 and 2,000 ft., forms the upper edge of dense, coniferous forests of Douglas fir, western redcedar, western hemlock, Sitka spruce, Alaska-cedar, lodgepole pine, along with many species of shrubs in and around the forest. Immediately above the tree line the vegetation consists primarily of shrubs, sedges, and mosses. These are also found along the hillsides and in drainageways of the forested areas. Soils are moist and of high organic content. The soils are often thin, or even absent, when relief is steep.

The soil and climatic consitions make Southeast Alaska a poor region for agriculture, resulting in the principal industry to consist of logging and fishing.

BIOLOGICAL CHARACTERISTICS OF WETLAND HABITATS

MARINE:

This system, in the mapping area, consists of all open water. All of our field observations involved estuarine rather than marine systems. The breaks made between the estuarine and marine systems are arbitrary, in an attempt to separate the high energy system of the Gulf of Alaska with the mapping area.

ESTUARINE:

The estuarine system consists of various types of wetlands, including all of the channels and bays in this area. Open water areas, labeled E1UBL, were found in the Gulf of Alaska bordering the islands and the mainland. The coastlines were typically flooded on a regular basis, resulting in the tidal flats and shores to be mapped as E2USN, and occassionally E2USP. Rocky shores were also present, being mapped as E2RSN or E2RSP, when visible on the photography. Algae was often present, indicated by an orange signature in the water or on rocks. When present as the spatially dominant type, the algae is mapped as E2ABIN. Emergents present in the coastal salt marshes are flooded on an irregular basis, therefore labeled as E2EMIP. The dominant vegetation present was Carex lyngbyei, which produces a pink to orange signature.

RIVERINE:

Both tidal and upper perennial subsystems are used in the mapping area. The majority of rivers present were freshwater and classified as R3UBH due to the high gradients and high water velocity. Occasionally, as the river nears the bay, it becomes a mix of unconsolidated shore and open water so is labeled as R3US/UB or R3UB/US, with no water regime. In this circumstance, the river is generally permanent. Many intermittent streams are present, as R4SBF or R4SBC, but often were not mapped due to their complexity. As the upper perennial river reaches the tidal influence of the estuarine system, the river is labeled as R1UBV.

LACUSTRINE:

There are numerous lakes of many sizes in the study area. The lacustrine open water bodies were always permanently flooded, those being unvegetated labeled as L1UBH. In some lakes, yellow water lily was present and classified accordingly as L2AB3H.

PALUSTRINE:

Ponds, palustrine open water areas, were prevalent throughout the mapping area. These consisted of bodies without any apparent vegetation, along with more shallow areas being vegetated. Generally, ponds were found to be permanent except for an occasional semipermanent body. A pinkish signature found in the pond indicates the presence of yellow water lily and is labeled PAB3H. Also present in and surrounding certain ponds, are emergent vegetation which produce a mottled, dark green tone and are mapped as PEMIF or PEMIC. Beaver impoundments are abundant in the study area and are labeled as PUBHb.

Palustrine areas which consist of emergent and forested or scrub shrub vegetation is found as the dominant wetland type in the areas under study. These bog areas, or muskegs, appear as a smooth signature varying in color, but generally appear as an orange-green to yellow tone and are labeled PEMIB. If the signature is found on a well-drained area, it is labeled as PEMIA. When the area gives a darker green signature, it indicates a very wet situation, possible semi-permanent conditions. The speckled browns often found scattered throughout these muskegs represent shrubs or trees of *Pinus contorta*, along with junipers and hemlock. When classified as a mixed class, the label is applied in accordance as to which class is the most spatially dominant, which results in large areas being mapped as PEMI/SS4B or PSS4/EM1B and PEM1/FO4B or PF04/EM1B. Much of the forests of the coastal areas, which consist of Sitka spruce, hemlock, cedar, juniper, and lodgepole pine, are saturated and are classified as PF04B. In these dense coniferous forests, the areas under saturated conditions will often appear to have a more open canopy on the photography.

The wetland plants in the muskegs consist of the dominant sphagnum along with the large variety of species listed below:

Sphagnum sp.
Myrica gale
Potentilla palustris
Lycopodium sp.
Empetrum nigrum
Rubus spectabilis
Eriophorum sp.
Andromeda sp.
Vaccinium uliginosum
Cladonia rangiferina
Ledum palustri
Carex sp.
Cornus canadensis
Unknown grasses

Along river floodplains, pure stands of alder shrubs often dominated and were labeled PSS1A. This orange-textured signature is easily identified on the photography. In some instances, the floodplain would consist of shrubs interpersed with patches of smooth pink emergents. This is classified as PSS1/EMIC. Often, the delta pan located at the mouth of the river is found supporting coniferous forests under temporarily flooded conditions and is labeled PFO4A.

The palustrine areas bordered by the estuarine system were predominantly vegetated with emergents producing a smooth orange-pink signature. These broad areas are classified as PEMIR.

IMAGERY, PRELIMINARY DELINEATIONS AND FIELD CHECKING

Overall, the aerial photography is of good quality. All imagery is of high resolution. Emulsion is good, but varies between the sets of imagery in a few instances. Some frames were blurred on the extreme edges, but the stereo pair could generally be relied upon for interpretation. One problem encountered during field checking was determining the upland break on the heavily forested slopes. No break is visible on the photography, despite heavily saturated conditions found in the field, leading to some interpretation difficulty in certain areas.

SUMMARY

The overall quality of photography is good and should allow for accurate identification and classification of the wetland habitats. Some difficulty with the wetland/upland breaks within the coniferous forests was encountered.

NWI#30