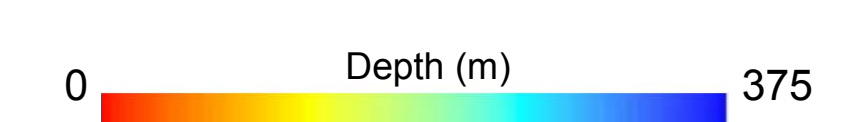
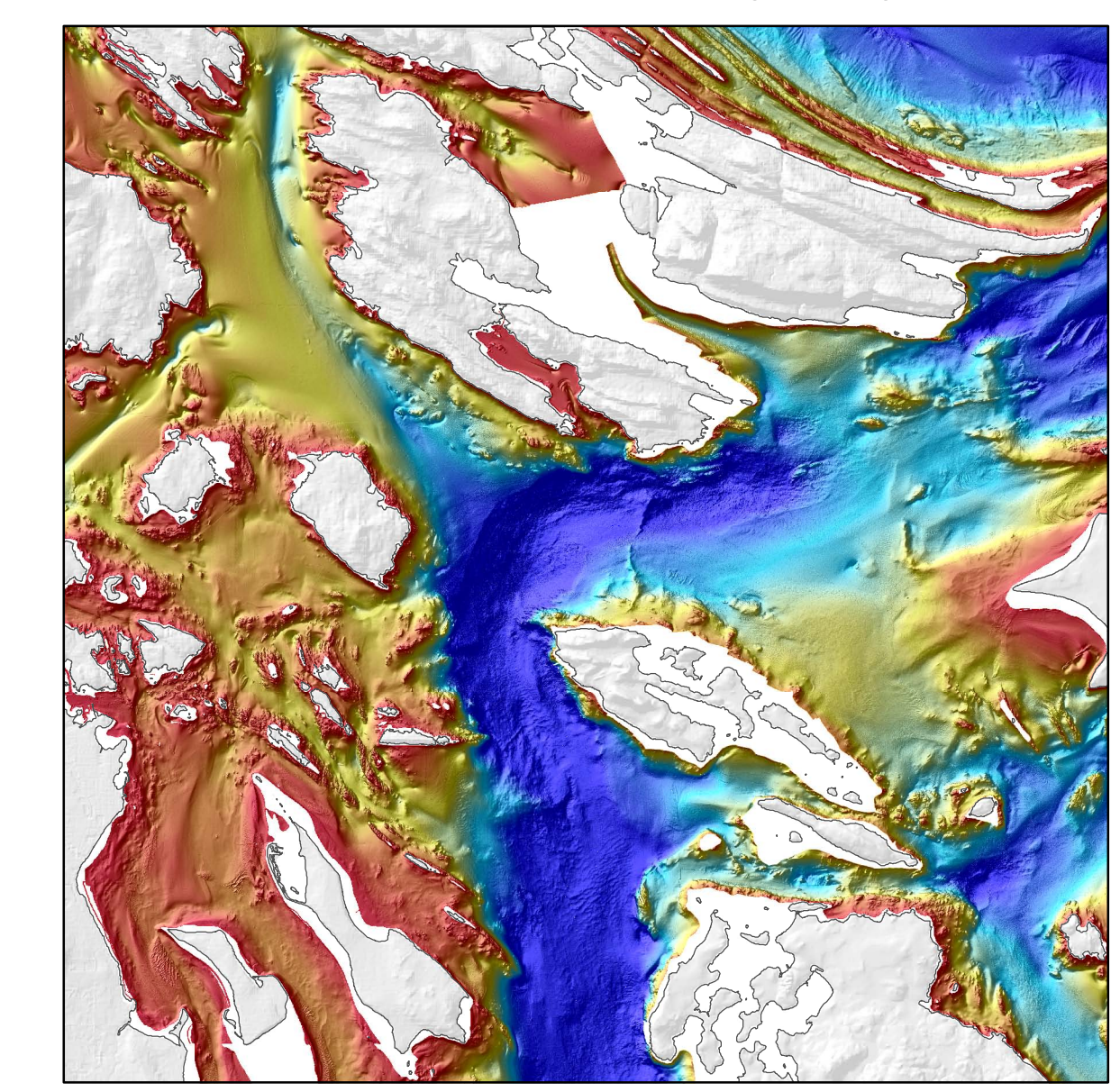


**DESCRIPTIVE NOTES**

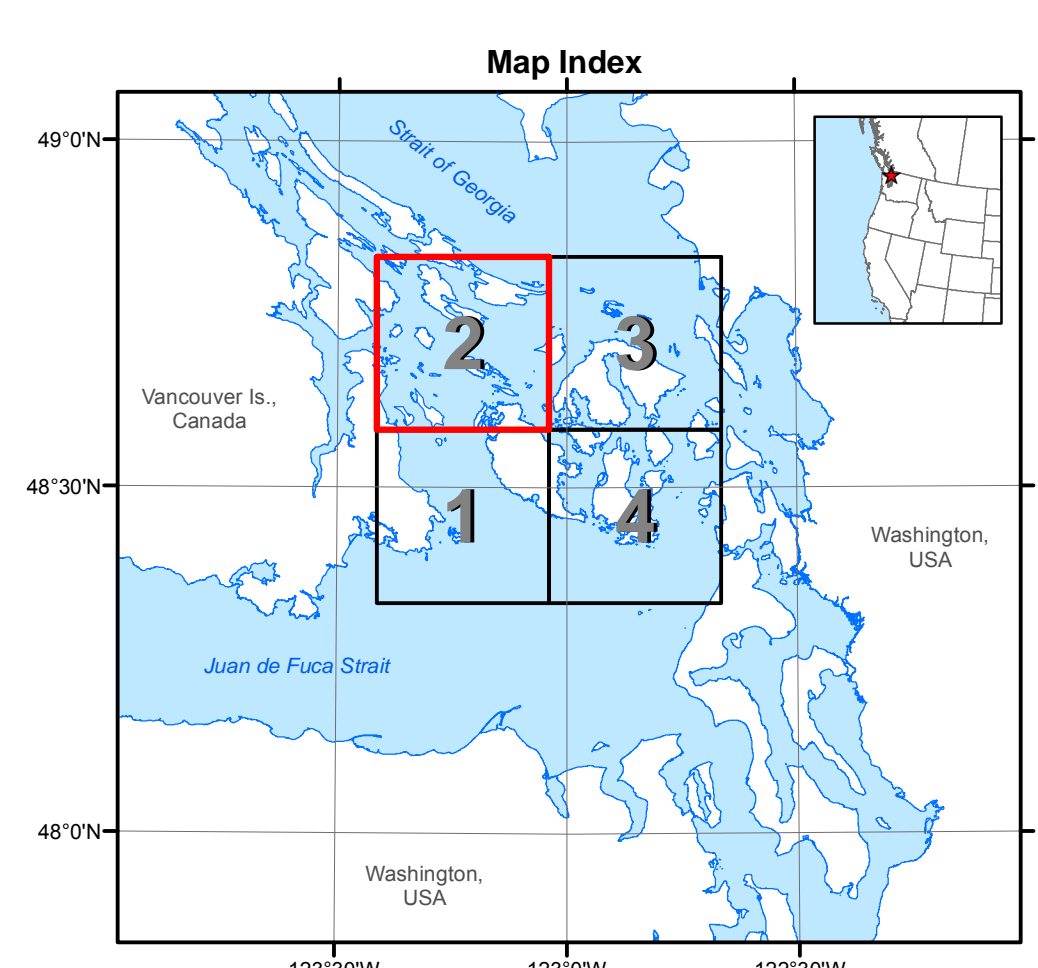
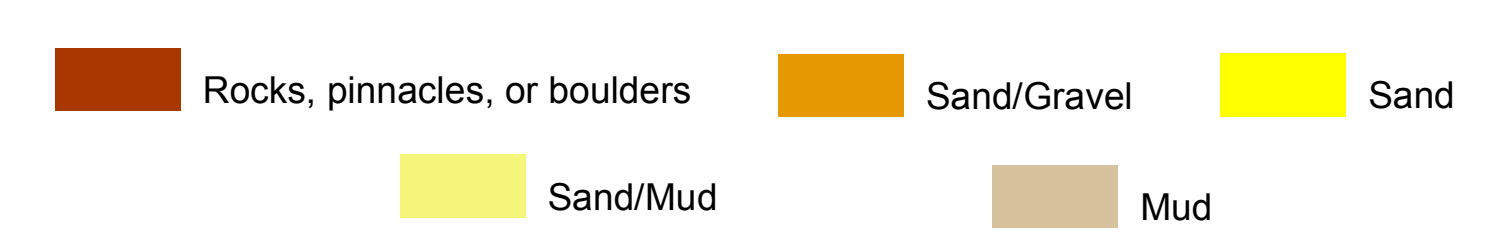
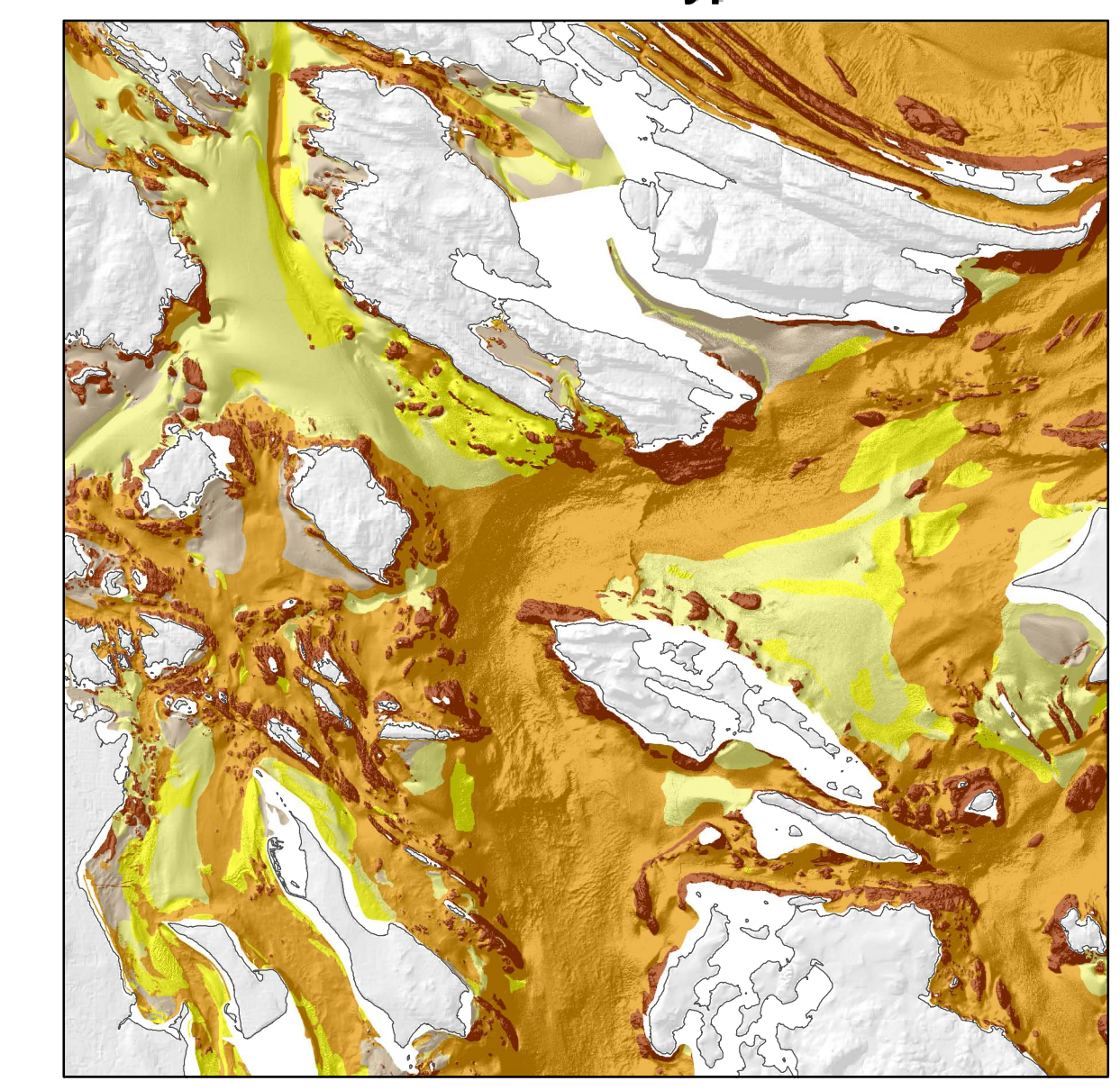
Backscatter intensity is a measure of sound that is scattered back toward the transmitter by acoustic reflection-water interface and within the sediment (volume scattering). Many factors influence the intensity value, among them are: the angle of incidence of the beam, the volume scattered, the seabed slope and the surficial sediment type and roughness. With these factors in mind, backscatter strength datasets are used to determine relative sediment differences within one or many datasets and aid the interpretation of the benthic habitat types. To assure the best interpretation, backscatter images are used in conjunction with other multibeam echosounder bathymetry derivative datasets, such as seafloor shaded relief, slope analysis and bathymetric contours. The multibeam echosounder bathymetry and backscatter raster datasets, as well as the benthic habitat layer were processed using ESRI ArcGIS tools.

The Transboundary region covered by this map series has been divided into four quadrants and this sheet (Sheet 2 of 4; Southern Gulf Islands) covers the Boundary Pass area between Saturna, South Pender and southern Salt Spring Islands to the north and northern San Juan, Stuart, Spieden and Waldron Islands to the south. Backscatter intensities vary from high (darker areas in mosaic) representing bedrock and coarse-grain sediment (pebbles, cobbles, boulders) to low intensities representing fine-grain sediment (sand and mud). Bedrock is comprised predominantly of hard differentially eroded sedimentary bedrock and medium to low intensities of backscatter represent dynamic bedforms and other sediment deposits in the Boundary Pass, northern Haro Strait, Spieden and President channels area.

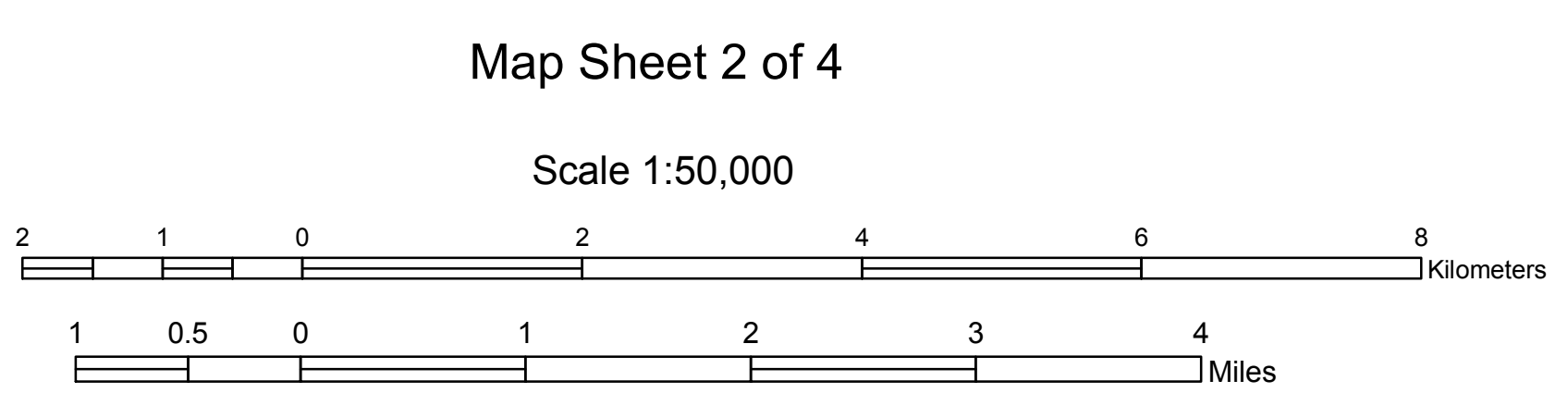
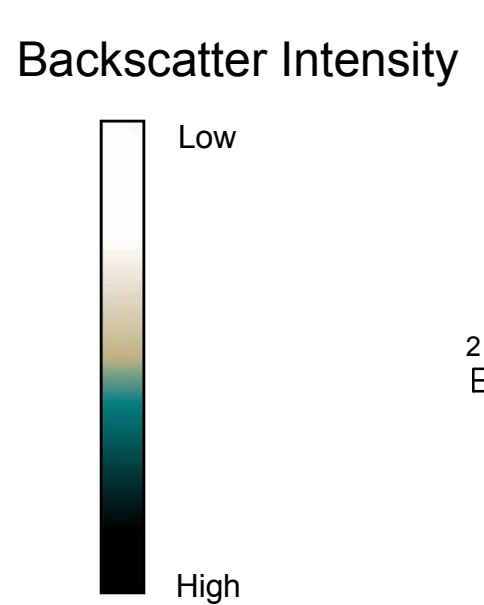
**Sun-Illuminated Bathymetry**



**Sediment Type**



**BACKSCATTER STRENGTH and SHADED SEAFLOOR RELIEF of the Southern Gulf Islands and San Juan Archipelago, Canada and USA**



Universal Transverse Mercator Projection, Zone 10 North  
North American Datum 1983

EDITORS: H. Gary Greene, J. Vaughn Barrie 2010

AUTHORS: Charlie Endris and Kim Picard

ACKNOWLEDGEMENTS: Canadian Hydrographic Service participants R. Hare, K. Czotter, E. Sargent, P. Milner, J. Gagne, C. Lessels, D. Cartwright, K. Lyngberg, and Canadian Coast Guard participants G. Allison and A. Keene

This map was produced by the Center for Habitat Studies at Moss Landing Marine Laboratories in cooperation with Tombo, the SeaDoc Society, Natural Resources Canada, and the Canadian Hydrographic Service

Digital Cartography by Charlie Endris, Center for Habitat Studies

