

Cruise Plan – R/V Sproul – Norris - 11 and 18 July 2009

Schedule Justification: We propose two 1 day cruises on the R/V Gordon Sproul to introduce students to different aspects of oceanographic research and to provide samples for laboratory study during shore-based part of the course.

The first day cruise (July 11), will emphasize biological oceanography: (1) oblique plankton (bongo net) haul, (2) an otter trawl near the Coronado banks, (3) a midwater trawl.

Station 1: 32 40 N, 117 20W (water depth ~120 m)

Oblique plankton net haul while steaming toward Station 2.

David Checkley is supplying the net. Ideally we would use a Bongo Net with 100 or 333 mesh

Station 2: 32 40 N, 117 23W to 32 40 N, 117 24W

Otter trawl while steaming toward Station 3

Station 3: 32 40 N, 117 32W

Midwater trawl

We will be doing one plankton tow (0-30 m), (Station 1), one Otter trawl (Station 2 steaming toward Station 3) and one midwater trawl (in the vicinity of Station 3). It will be important to keep track of the depth for the otter trawl once it is deployed at Station 2 so that it is hauled off the bottom before we reach the Coronado Bank. Last year the trawl was left out too long and was damaged crossing hard substrate on the east side of the bank. The Midwater trawl will be towed at ~400 m depth for about 1 hour. This can be done steaming slowly from Station 3 back toward Station 2. We expect to acquire some of the material caught in the midwater trawl and otter trawl for the SIO pelagic invertebrates collection and SIO marine vertebrates collection. We do not expect to retain significant amounts of the plankton tow sample, but will examine all the sampled material in the ship's laboratory space during the cruise.

The second day cruise on July 18 will focus on physical oceanography: (1)

CTD (2) Van Veen grabs at three depths (270-650 m) from the upper western slope of Coronado Bank; (3) Multicore.

We will cruise directly to Station 1 from Pt Loma. At Station 1 we will conduct the first Van Veen Grab and during recovery of the grab we will move to station 2. We will

deploy the grab once at each of Station 1, 2 and 3. Greg Rouse will be prepared to collect any interesting samples acquired by the grabs for the SIO Benthic Invertebrate Collection. At the conclusion of the third grab, we will proceed to Station 4 and deploy the CTD to 500 m depth. Once the CTD has been recovered, we will deploy the multicorer once with a full complement of barrels. R. Norris will bring tubes and end caps to preserve the cores. Once the multicorer is back on deck we can return to MARFAC. [If, by some chance, there is extra time in the day, we would like to return to Station 1 to take another van veen grab.]

Station 1: 32 40 N, 117 28W (~270 m water depth)

Van Veen Grab on the upper western slope of Coronado Bank

Station 2: 32 40 N, 117 29W (~480 m water depth)

Van Veen Grab on the middle western slope of Coronado Bank

Station 3: Start: 32 40 N, 117 29'30W (~650 m water depth)

Van Veen Grab on the middle western slope of Coronado Bank

Station 4: 32 40 N, 117 32W

Multicore: