Visual Fish Transects

Access Table Design Structure for VisualFishTransects

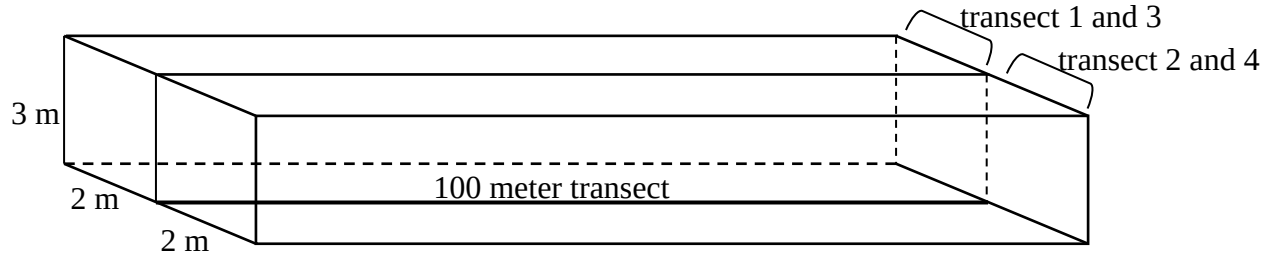
Field Name	Data Type
SiteNumber	Number
IslandCode	Text
IslandName	Text
SiteCode	Text
SiteName	Text
SurveyDate	Date/Time
Species	Number
ScientificName	Text
CommonName	Text
Transect_Number	Number
CountA	Number
CountB	Number

Sample Size and Database Anomalies

Visual fish transect size has changed once since the protocol was implemented in 1985. From 1985-1995 fish transect size was 3 m × 2 m × 100 m. From 1996 to present, transect size has been 3 m × 2 m ×50 m. Although the size of the transects has changed, four transects have always been conducted during each sampling. If fish transects are to be compared between years in which these different methods were used, the transects can be standardized by adding transects 1 and 2 for the data from years 1996 to present. This value will be equal to transect 1 from the data up until 1995. Similarly, transects 3 and 4 from the years 1996 to present can be added together to equal transect 2 from years up until 1995. Comparisons of transects 3 and 4 prior to 1996 with years after 1996 cannot be conducted.

Below is a diagram of how fish transects were conducted prior to 1996. For a diagram for the 1996-present fish transects, please see the section on visual fish transects presented in the protocol section.

1985 – 1995:



1996 – Present: See Figure 7.

In 1996 and 1997, fish species were split into midwater and benthic fish with two separate data sheets. This was conducted as a recommendation of the 1995 Kelp Forest Monitoring Design

Review (Davis et al, 1996). Two trained observers conducted fish transect, one counting the midwater fish and the other counting benthic fish. New staff was hired in 1998, and it was not possible to continue counting midwater and benthic fish with trained divers. In 1998, the midwater and benthic data sheets were combined into a "Fish All" data sheet, similar to what had been used prior to 1996. It is believed that there has been little to no effect of splitting up the fish into midwater and benthic categories for the 1996 and 1997 sampling years.

In 1995 we added the Observer Number field into the database. Observer Numbers were not entered into the database prior to this year.

CountA and CountB: Prior to 1996, there were occasionally two observers counting fish along the same transect. When this occurred the data were entered as CountB. From 1996-1997, observers counted separate sets of fish ("midwater" and "benthic", see 1996-1997 above) and these counts were entered under CountA and CountB was not used during this time.

Table 26. Number and size of visual fish transects sampled 1985 – present.

Year	# Transects sampled	Transect Size	Count A	Count B
1985 – 1995	4	3 m x 2 m x 100 m	yes	yes, when 2nd observer available
1996 – 1997	4	3 m x 2 m x 50 m	yes	null
1997 – present	4	3 m x 2 m x 50 m	yes	yes, when 2nd observer available

Transect Placement

The transect runs directly along the entire transect line at the site. Prior to 1996, transects 1 and 3 covered the same substrate, as did transects 2 and 4. From 1996-present, each transect covers different substrate. See the aforementioned diagrams.

Organisms Sampled Information

Table 27. Visual fish transect species sampling history.

Species Name	Species Code	Comments
Chromis punctipinnis, Adult	14001	Sampling began in 1985
Chromis punctipinnis, Juvenile	14002	Sampling began in 1985
Oxyjulis californica, Adult	14003	Sampling began in 1985
Oxyjulis californica, Juvenile	14004	Sampling began in 1985
Sebastes mystinus, Adult	14005	Sampling began in 1985
Sebastes mystinus, Juvenile	14006	Sampling began in 1985
Sebastes serranoides, Adult	14007	Sampling began in 1985
*Sebastes serra*noides, Juvenile	14008	Sampling began in 1985
Sebastes atrovirens, Adult	14009	Sampling began in 1985
Sebastes atrovirens, Juvenile	14010	Sampling began in 1985
Paralabrax clathratus, Adult	14011	Sampling began in 1985
Paralabrax clathratus, Juvenile	14012	Sampling began in 1985
Semicossyphus pulcher, Male	14013	Sampling began in 1985
Semicossyphus pulcher, Female	14014	Sampling began in 1985
Semicossyphus pulcher, Juvenile	14014.5	Sampling began in 1996
Embiotoca jacksoni, Adult	14015	Sampling began in 1985
Embiotoca jacksoni, Juvenile	14016	Sampling began in 1985

Embiotoca lateralis, Adult	14017	Sampling began in 1985
Embiotoca lateralis, Juvenile	14018	Sampling began in 1985
Damalichthys vacca, Adult	14019	Sampling began in 1985
Damalichthys vacca, Juvenile	14020	Sampling began in 1985
Hypsypops rubicundus, Adult	14021	Sampling began in 1985
Hypsypops rubicundus, Juvenile	14022	Sampling began in 1985
Girella nigricans, Adult	14023	Sampling began in 1985
Girella nigricans, Juvenile	14024	Sampling began in 1985
Halichoeres semicinctus, Male	14028	Sampling began in 1993
Halichoeres semicinctus, Female	14029	Sampling began in 1993

Sites Sampled Information

Table 28. Visual fish transect site sampling history.

Dates Available	Island Name	Site Code
1985 – Present	San Miguel	WL, HR
	Santa Rosa	JLNO, JLSO, RR
	Santa Cruz	GI, FH, PB, SA
	Anacapa	AR, CC, LC
	Santa Barbara	SESL, AP
1986 – Present	Santa Barbara	CAT
	Santa Cruz	YB
2001 – Present	San Miguel	MM
2003 – 2004	San Clemente	NWH, BSC, EP, HBC
2005 – Present	Santa Rosa	CP, TC, CSAW, SP
	Santa Cruz	DPM, PP, CVP, LS, PRF
	Anacapa	KH, EFC, BSBR, LH
	Santa Barbara	WA, GC, SER