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¹² Abstract (Purpose, method, results, conclusions) <p>The benthic communities in Mamala Bay, Oahu have been monitored since 1974 to assess the extent to which the introduction of sewage effluent at about a 70-m depth has affected the system. The index organisms utilized are micromollusks, mollusks less than about 7 mm in greatest dimension. Replicate sediment samples were obtained by modified Petersen dredge from 11 stations at 15- to 120-m depths between 1974 and 1981; samples from the diffuser and the ZID boundary were obtained by submersible-operated grab in 1982. Aliquots of sediment were sorted for micromollusks and analyzed by Q-mode cluster analysis, relative species composition, relative abundance, species diversity, and dominance. Three micromolluscan assemblages were distinguished. A <u>Tricolia</u>-rissoid dominated assemblage is an algal and rubble-associated assemblage of microherbivores derivative of the reef. An infaunal assemblage with about 30% of the mollusks' carnivorous, parasitic and/or deposit feeders is associated with the occurrence of beds of the bivalve <u>Pinna</u>. The habits of the mollusks of the third assemblage, the dialid assemblage, are not known. Mean micromolluscan abundance tends to increase with depth; number of species and species diversity decreases with depth. Abundance is not significantly different between pre- and post-discharge stations. The <u>Tricolia</u> assemblage was the most frequently occurring assemblage under pre-discharge conditions; the infaunal assemblage the most frequently occurring assemblage under post-discharge conditions. In the submersible-obtained samples, only the dialid assemblage was represented at the ports of the diffuser and only the <u>Tricolia</u> assemblage at the ZID boundary. It is suggested that the micromolluscan assemblages in Mamala Bay are distributed in a continuum throughout the bay, their boundaries associated with different types of sediment. No major changes in the benthos associated with the introduction of sewage effluent were detected in this study, but variations in pattern of assemblage occurrence may be the result of changes in sediments associated with diffuser activity.</p>	

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MICROMOLLUSCAN ASSEMBLAGES
IN MĀMALA BAY, O'AHU, 1974-1982

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Technical Report No. 158

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for
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ABSTRACT

The benthic communities in Māhala Bay, O'ahu have been monitored since 1974 to assess the extent to which the introduction of sewage effluent at about a 70-m depth has affected the system. The index organisms utilized are micromollusks, mollusks less than about 7 mm in greatest dimension.

Replicate sediment samples were obtained by modified Petersen dredge from 11 stations at 15- to 120-m depths between 1974 and 1981; samples from the diffuser and the ZID boundary were obtained by submersible-operated grab in 1982. Aliquots of sediment were sorted for micromollusks and analyzed by Q-mode cluster analysis, relative species composition, relative abundance, species diversity, and dominance.

Three micromolluscan assemblages were distinguished. A *Tricolia*-rissoid dominated assemblage is an algal and rubble-associated assemblage of microherbivores derivative of the reef. An infaunal assemblage with about 30% of the mollusks' carnivorous, parasitic and/or deposit feeders is associated with the occurrence of beds of the bivalve *Pinna*. The habits of the mollusks of the third assemblage, the dialid assemblage, are not known.

Mean micromolluscan abundance tends to increase with depth; number of species and species diversity decreases with depth. Abundance is not significantly different between pre- and post-discharge stations. The *Tricolia* assemblage was the most frequently occurring assemblage under pre-discharge conditions; the infaunal assemblage the most frequently occurring assemblage under post-discharge conditions. In the submersible-obtained samples, only the dialid assemblage was represented at the ports of the diffuser and only the *Tricolia* assemblage at the ZID boundary.

It is suggested that the micromolluscan assemblages in Māhala Bay are distributed in a continuum throughout the bay, their boundaries associated with different types of sediment. No major changes in the benthos associated with the introduction of sewage effluent were detected in this study, but variations in pattern of assemblage occurrence may be the result of changes in sediments associated with diffuser activity.

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INTRODUCTION

The benthic communities in Māmalala Bay, O'ahu have been monitored since 1974 in an attempt to assess the extent to which the introduction of sewage effluent by a multiport diffuser located at depths from 69 to 72 m about 3 000 m offshore has affected the system. The index organisms utilized in the monitoring program are micromollusks, mollusks less than 7 mm in greatest dimension, obtained from sediment samples. Earlier reports on the monitoring program are those of Kay (1975, 1978, 1979_a, 1982) and Kay and Kawamoto (1980).

The purpose of this report is to summarize the data now available from the initial sampling effort in 1974 through a fifth sampling program in 1981. These data are augmented by samples obtained from the vicinity of the diffuser and the ZID (zone of initial dilution) boundary by submersible in November 1982. In this report the distribution and abundance of the sublittoral benthic micromollusks within Māmalala Bay are quantified, species composition and species diversity are described, a grouping of species into three assemblages is recognized, and interpretations of the fluctuations detected in the benthic fauna over the seven year period are proposed.

The samples analyzed are time-averaged collections which represent the last year (or perhaps even several years) accumulation of sediments. The validity of the results is based on two assumptions: (1) that transportation is minimal and (2) that total populations are accurate indicators of benthic communities. There is now a considerable body of evidence indicating that transportation does not play a major role in mixing shelly benthic assemblages (Ekdale 1978; Warne et al. 1976) and there is increasing evidence that total microfaunal assemblages are more accurate indicators of general environmental conditions than living assemblages (Scott and Medioli 1980).

MATERIALS AND METHODS

Field Methods

Replicate samples obtained by modified Petersen dredge from 11 stations at depths of from 15 to 120 m in Māmalala Bay were provided for analysis by the City and County of Honolulu Division of Wastewater Management between

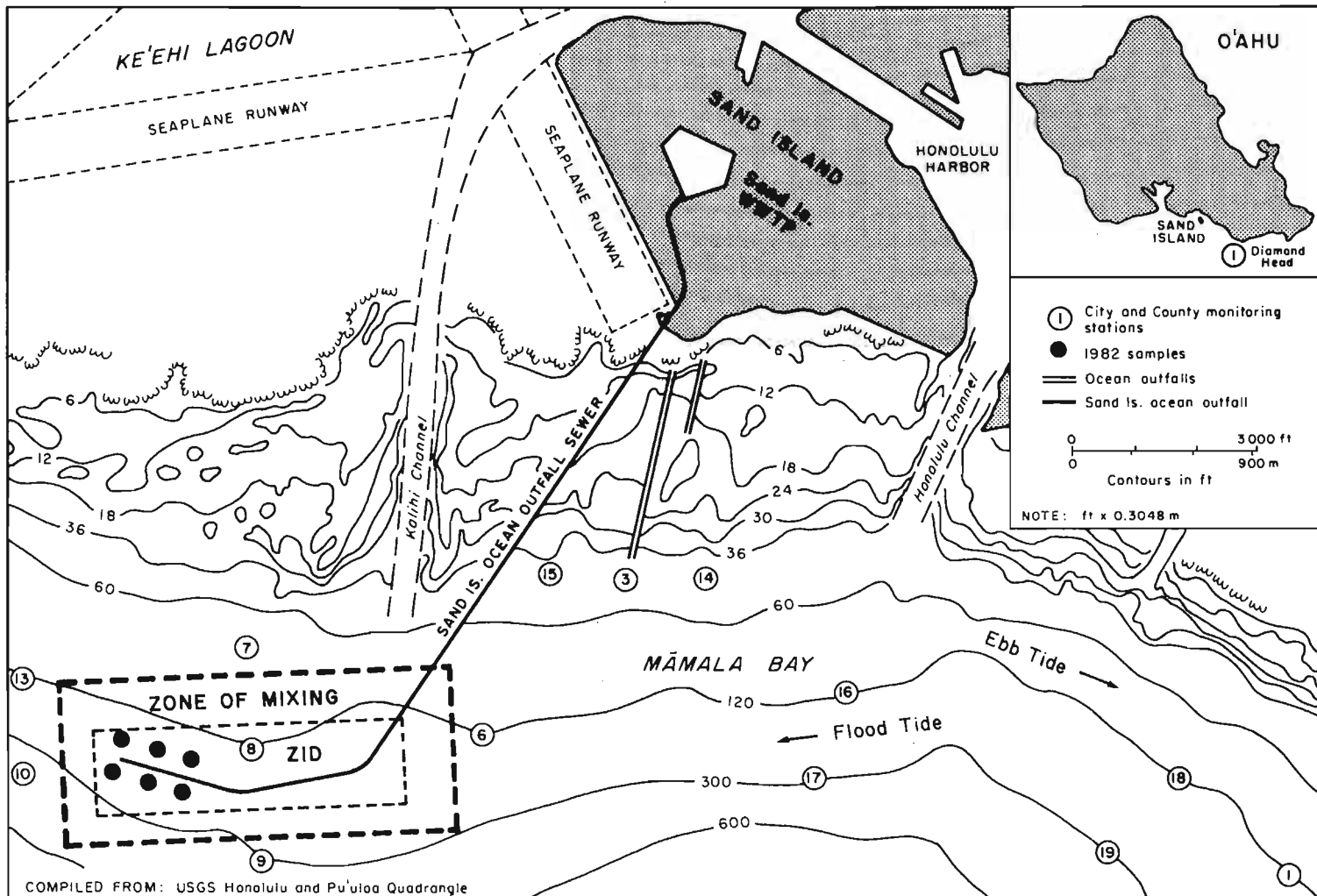
1974 and 1981. From 1974 to 1977 station locales were determined by bearings on landmarks (such as Tripler Army Hospital, Aloha Tower, and Diamond Head), and depths were estimated by length of cable released. In 1979 and 1981 locations were determined by triangulation, and depth determined by fathometer. The 1982 submersible-collected samples were obtained by ship-operated grab from the vicinity of the diffuser ports and from the ZID boundary at a depth of 72 m.

Monitoring Stations

Six monitoring stations were established between Diamond Head on the east and Sand Island on the west in 1974, and an additional five stations were included in the program in 1977. The stations are shown in Figure 1. Stations 13 and 10, the westernmost stations, are downcurrent of the diffuser, at depths of from 51 to 97 m. Stations 7, 8 and 9 are in a parallel line which runs through the Zone of Mixing (ZOM) and are at depths of from 30 to 110 m. Stations 6 and 16 to 19, at distances of from 350 to 3 600 m east of the ZOM boundary are upcurrent of the diffuser, at depths ranging from 18 to 120 m. Station 1, nearly opposite Diamond Head, was designated the control station as it lies farthest from the point of discharge upcurrent; depths ranged from 10 to 81 m.

Sampling depths over the seven year monitoring period are listed in Table 1. It is clear that there is considerable variability in depth even at the presumably same station. These depth variations were probably caused by inexact bearings and other factors such as wave action and boat movement which tend to make duplication of exact station locations difficult. Despite the differences in sampling depths and station locations, however, only 5 (16%) of 32 replicated samples were anomalous, that is, the micro-molluscan assemblages noticeably differed in species composition.

Although six stations were initially established for the monitoring program, only one sample (748C) of 29 analyzed in 1974 can be construed as having been dredged from the future location of the diffuser, and only one sample (7510B) in 1975 approximates the depth of the diffuser. For purposes of comparison of pre-discharge and post-discharge conditions, four 1974 samples and three 1975 samples which fall into the 60 to 80 m depth range (considered comparable with the depth at which the diffuser was constructed) are compared with samples at similar depths at stations 6, 7, 8, and 9. Of the



NOTE: ZID = Zone of Initial Dispersion.

Figure 1. Map of sampling stations, Māmala Bay (Sand Island), O'ahu

TABLE 1. STATIONS AND DEPTHS SAMPLED,
MĀMALA BAY, O'AHU, 1974-1981

STA- TION	SAMPLING DEPTH (m)				
	1974	1976	1977	1979	1981
1	48-56	36-50	81	59-63	62-66
18	*	*	36-42	40	18-40
19	*	*	†	100-110	100-120
16	*	*	41	40	†
17	*	*	90	100	90
6	70-81	65-79	38	66	68
7	93-97	12-15	31-41	33-36	30-32
8	60-70	55-66	84-89	60-85	80
9	100-108	100-110	105	46-86	108
10	51-65	65	97	66	72
13	*	*	65	33	60

*Not sampled.

†Insufficient samples for analysis.

51 samples obtained under post-discharge conditions, only two appear to fall within the Zone of Mixing and hence represent stations at or near the diffuser, but twenty samples obtained at depths of 60 to 80 m are used in the comparisons.

Laboratory Methods

Sediment samples were washed in fresh water and air dried. Aliquots of from 5 to 25 cm³ were sorted for micromollusks under a binocular dissecting microscope and the picked shells identified to species and counted. Live-dead counts were not made, although it would be possible to do so at a later date. An attempt was made to count at least 100 specimens from each sample. Both the sorted aliquot and an unsorted sample are retained for deposition in the Core Laboratory of the Hawaii Institute of Geophysics, University of Hawaii; shell samples are presently maintained in the senior author's laboratory at the University of Hawaii. The data are recorded in a data base maintained at the Computing Center, University of Hawaii.

Analysis

The data consist of counts of the number of individuals belonging to about 100 species of mollusks in 94 samples. Generic and specific identifications follow Kay (1977b). Five techniques are used to describe the assemblages:

1. Q-mode cluster analysis was computed on a Sorenson-based coefficient of similarity (Mueller-Dombois and Bridges 1975), with the resultant clusters (Figs. 2, 3) based on relative abundance or percentage composition.
2. Relative species composition, the percent representation of each species in each sample, was used to characterize the samples. The term "dominant" applies to species which have the largest percentage in the sample, and "subdominant" refers to species with lesser, but still significant percentage occurrence.
3. Each sample was analyzed for abundance, number of shells per cm^3 of sediment.
4. Species diversity is described by H' , the Shannon-Wiener information function, where p_i is the proportion of the i th species (Pielou 1969) and by species richness, the number of species.
5. Community dominance, $D = y_1 + y_2$ where y_1 and y_2 are the percentage values of the two most abundant species (McNaughton 1968; Franz 1976, was also used to analyze species diversity of the assemblages.

PHYSICAL SETTING

Māmala Bay extends along the leeward shoreline of O'ahu from Diamond Head on the east to Barbers Point on the west and fronts Waikīkī Beach, Kewalo Basin, downtown Honolulu, Honolulu Harbor, and Pearl Harbor. The bay has been subject to point and nonpoint effluent discharge since at least 1800 when Honolulu Harbor became an important berth for ships sailing across the Pacific. In addition to human-produced effluent, the shoreline of Māmala Bay is also subject to freshwater runoff. At least ten major streams

discharge into the bay and shoreward swamps (the coastal area east of Honolulu to the slopes of Diamond Head was originally swampy) and springs have also contributed to discharge into Māmala Bay.

From 1955 to 1978 a shallow outfall discharged up to $2.72 \text{ m}^3/\text{s}$ (62 mgd) of raw sewage at a depth of 12 m onto the coral reef which fringes the shoreline about 1 000 m from shore. Field studies demonstrate clear patterns of negative environmental impact extending 5 000 m west and 1 900 m east of the outfall (Dollar 1983; Kay 1979a). The deep-water outfall was constructed during 1975 to 1976 and discharges primary treated effluent through a multiport diffuser 3 000 m offshore at depths of 69 to 72 m.

Māmala Bay is a coral reef-fringed embayment. Depths in the bay range from the tideline at the shoreward edge of the fringing reef to more than 300 m within about 4 500 m of the shore. Reports from submersible surveys of the floor of the bay indicate that at depths of 72 m (the depth of the present diffuser), there is little obvious topographic relief. Corals are not generally found at this depth but algae (suggested to be Sargassum) were noted at 76 m and sea urchins were described on the walls of the standards (Dollar 1983).

Current studies indicate primarily easterly flowing currents such that the downstream area of the diffuser is to the west and the upstream area to the east. The current pattern is, however, modified by tidal currents which flood from the west and ebb eastward, while counterflow may occur along the front of the reef. Kona or southerly wind conditions also affect changes in current flow. Sediments in the bay are largely calcareous, although terrigenous material has been deposited in deep dredge spoils at depths of 300 m off Pearl Harbor and Honolulu Harbor (Chave and Miller 1977).

RESULTS

Abundance and Species Diversity

The data set for the 11 monitoring stations in Māmala Bay consists of 81 samples of which 32 are replicated samples. About 32,000 specimens of mollusks were counted representing nearly 100 species. Abundance, which ranged from about two shells per cm^3 to 58 shells per cm^3 , tends to increase with depth between 15 and 120 m, but the correlation is not significant. Number of species (range from 10 to 61) and diversity (H' , range 1.9 to 4.1)

decrease with depth ($p > 0.1$).

Micromollusk Assemblages

Each suite of the seven years sampling effort and the submersible-collected samples as well as combined suites of samples were analyzed by Q-mode cluster analysis (Fig. 2). In these analyses, the stations cluster in three groups at the 40 to 50% level of discrimination. The three groups, named for dominant species or species groups occurring in the assemblages, are the Tricolia assemblage, the dialid assemblage and the infaunal assemblage. The dominant species in each of the assemblages and their relative abundances are shown in Figure 3, and relevant statistics listed in Table 2.

The diagnostic species in the Tricolia assemblage (Table 2) is the geographically widespread phasianellid gastropod Tricolia variabilis, which together with four species of rissoids (Vitricithna marmorata, Parashiela beetsi, Rissoina ephamilla, and R. flexuosa) comprise about 40% of the assemblage. Four species of dialid are subdominant and make up about 16% of the assemblage. Other subdominants include minute gastropods such as orbitellids and Lophocochlias minutissimus. The mollusks in this assemblage are primarily epifaunal microherbivores and detritivores, with relatively few bivalves or predators present. Abundance ($\bar{x} = 19$ shells/cm³) and community dominance are lowest and species diversity (H') highest among the three assemblages. Mean depth at which samples representing the Tricolia assemblage occur is about 51 m. The infaunal assemblage (Table 2) is distinguished from the other assemblages not so much by its dominant species component, four species of dialid which comprise about 43% of the samples, but by a distinctive group of accessory species which make up 25 to 73% of the samples: the dialid Finella pupoides, the echinoid parasite Balcis, and the infaunal mollusks, Caecum, Natica, Acteocina, and tellinid bivalves. These accessory species provide trophic diversity to the assemblage: Balcis, Natica, and Acteocina are carnivorous, Natica feeds on other mollusks, Balcis is a parasite on sea cucumbers and sea urchins, and Acteocina feeds on foraminiferans. The tellinids and other bivalves in the assemblage are dependent on the water column in feeding, with the tellinids largely deposit feeders.

The infaunal assemblage is strongly associated with beds of the large bivalve Pinna: 78% of the samples represented by the infaunal assemblage

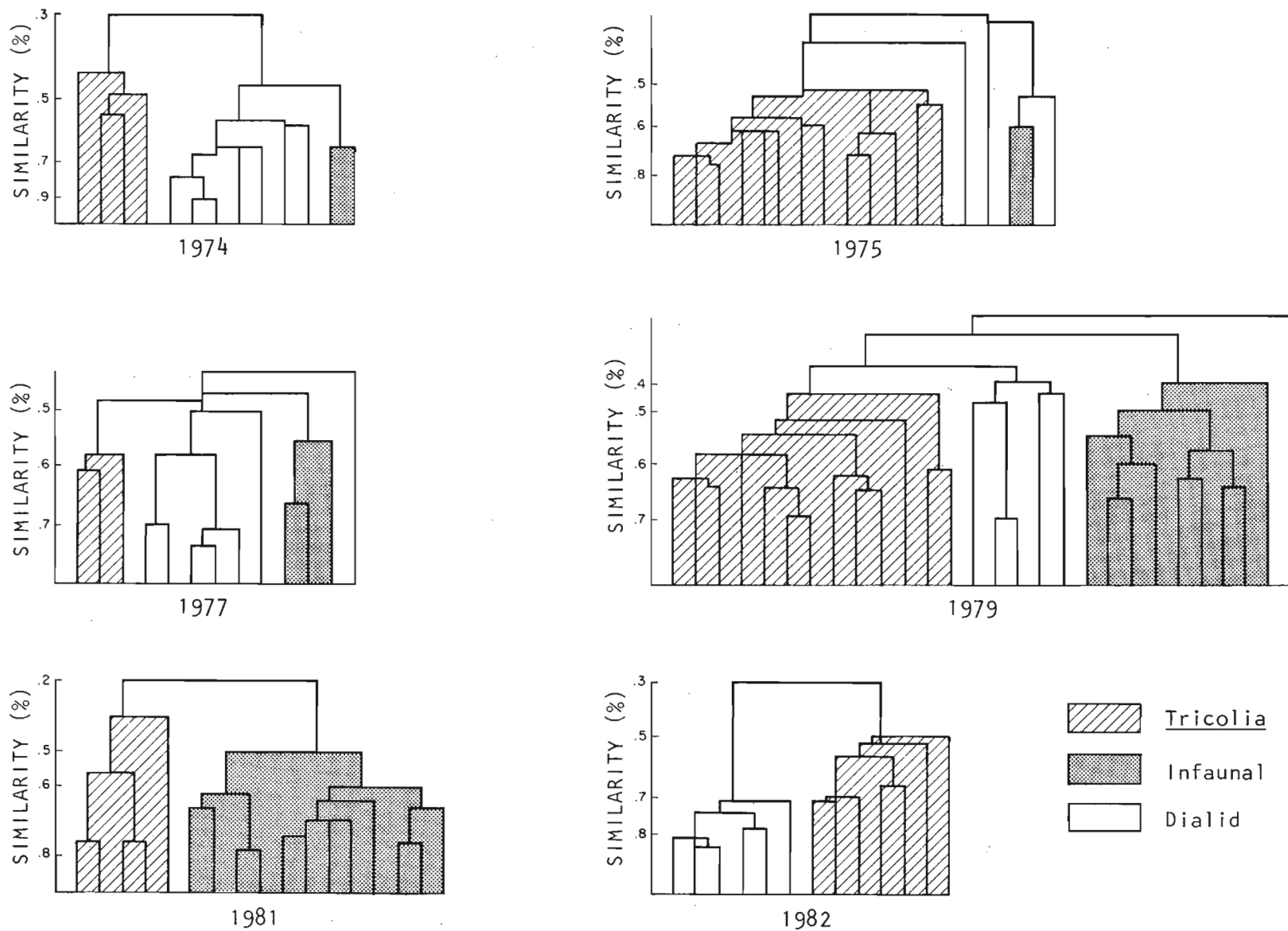


Figure 2. Cluster analysis showing clusters of *Tricolia*, infaunal, and dialid assemblages in samples from 1974-1981 and from submersible-collected 1982 samples, Māhala Bay, O'ahu

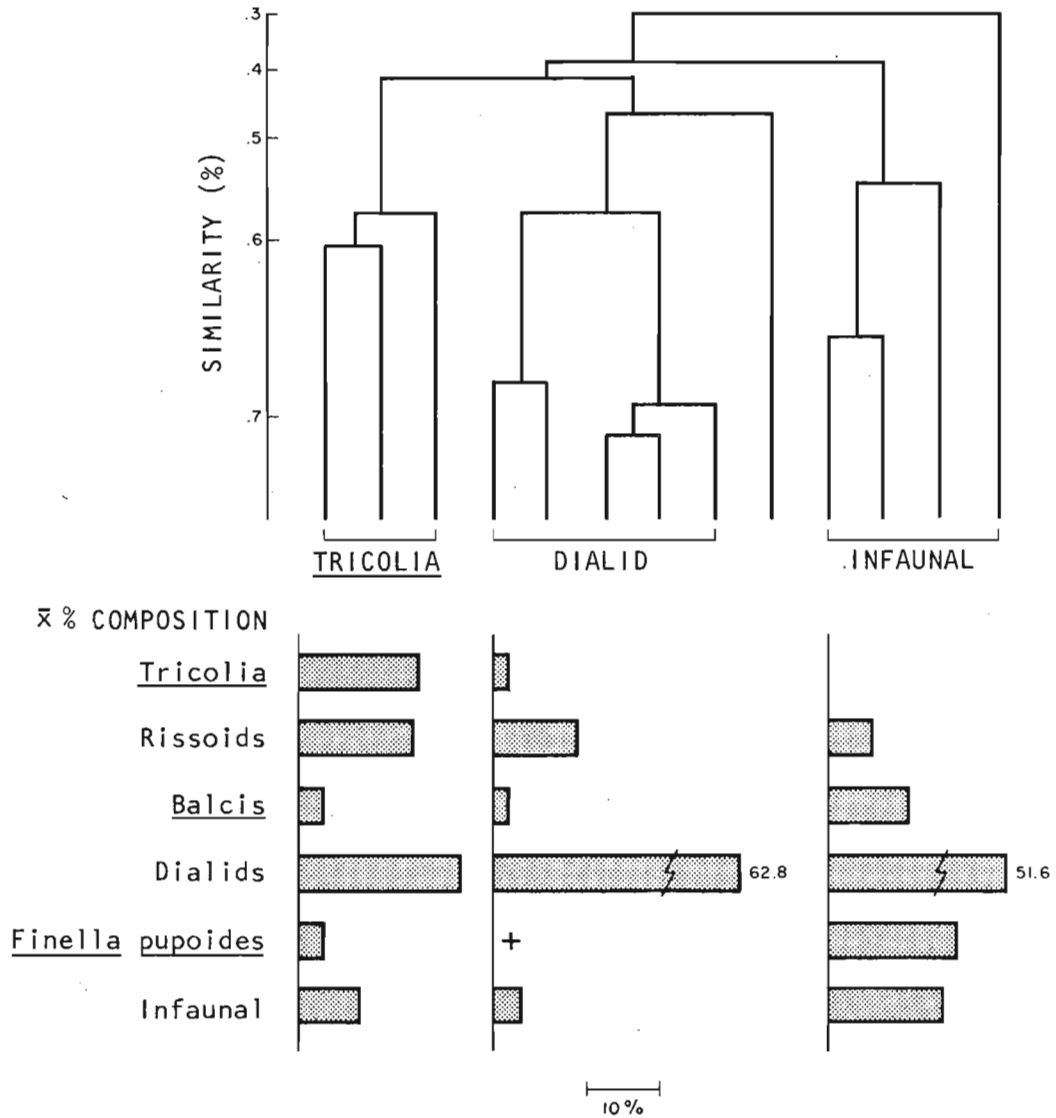


Figure 3. Cluster analysis showing Tricolia, dialid, and infaunal assemblages and relative proportions of dominant species and species groups in 1977 samples, Māmala Bay, O'ahu

TABLE 2. MICROMOLLUSCAN ASSEMBLAGES IDENTIFIED AT STATIONS 1-17
IN MĀMALA BAY, O'AHU, 1974-1981

	Tricolia	Std. Dev.	Dialid	Std. Dev.	Infauna	Std. Dev.
No. of Samples	31		19		27	
Depth (m)	50.9	25.9	71.9	23.9	78.9	22.5
Abundance (no./cm ³)	18.9	12.9	32.8	14.1	25.2	12.5
No. of Species	36.4	11.0	30.1	7.4	16.6	6.1
Species Diversity	3.1	0.57	3.1	0.96	2.8	0.62
Dominance	35.5	6.7	45.2	13.2	42.0	9.7
SPECIES COMPOSITION (%)						
<u>Tricolia variabilis</u>	15.1	7.4	1.4	1.5	1.1	2.0
Rissoidae	24.5	6.8	14.8	7.1	7.6	4.8
Dialidae	16.4	9.1	62.3	18.7	45.2	12.1
<u>Balcis</u>	1.2	1.3	3.2	2.6	12.2	6.2
Infauna	5.7	4.2	4.0	5.1	10.9	5.2
<u>Finella pupoides</u> *	22		26		100	

*Frequency of occurrence rather than percent composition.

bivalve Pinna: 78% of the samples represented by the infaunal assemblage were found with Pinna fragments or larvae while only 37% of the samples of the Tricolia and dialid assemblages were found with Pinna. The difference is highly significant (χ^2 test, $p = <0.01$). Abundance, species richness and species diversity (25.2/cm³, 27 and 2.9 respectively) lie between those of samples of the Tricolia and dialid assemblages, and samples representing the assemblage tend to occur in deeper water than do the samples of the other assemblages, with mean depth about 79 m.

The third assemblage, although termed the dialid assemblage (Table 2) because of the four species of dialids which comprise an average of more than 60% of the assemblage, is characterized more by what it lacks than what is present. Finella pupoides, found in all of the samples of the infaunal assemblage, occurred in 26% of the dialid assemblage samples. Balcis and infaunal mollusks are equally scarce. As a result of the dominance pattern, species diversity is lower and community dominance higher than in the samples representing the other two assemblages. Abundance averages about 33 shells per cm³ and is highest among the three assemblages. Mean depth at

which the samples occurred is about 72 m.

Distribution of the Assemblages

There are no distinctly mappable patterns among the assemblages, although several generalizations can be made concerning their distribution in

TABLE 3. SAMPLING STATIONS AND TRICOLIA, DIALID, AND INFAUNAL ASSEMBLAGES IN MAMALA BAY, O'AHU, 1974-1981

Sta. No.*	1974	1975	1977	1979	1981
1	A Tric B Tric C Tric D Tric	A Tric B Tric	A Tric	A Tric B Tric	A Tric B Tric
18	....	....	A Dial B Inf	A Dial B Dial	A Dial
19	....	....	...	A Inf B Dial	A Inf B Inf
16	....	....	A Tric	A Dial	...
17	....	....	A Dial	A Inf B Inf	A Inf B Inf
6	A Dial B Dial C Dial	A Dial B Dial	A Tric	A Tric B Tric	A Inf B Inf
7	D Tric E Dial	A Tric	A Inf B Dial	A Dial B Dial	A Tric
8	A Dial C Dial	A Tric B Tric C Tric	A Dial B Dial	A Tric B Inf	A Inf B Inf
9	A Inf B Inf	A Tric B Tric	A Dial	A Inf B Inf	A Inf
10	B Tric C Inf	B Inf	A Dial	A Inf B Inf	A Inf
13	...	...	A Inf	A Tric B Tric	A Inf B Inf

NOTE: Tric = Tricolia assemblage, Dial = dialid assemblage,

Inf = infaunal assemblage; A, B, C, D = replicates.

* Stations listed east to west.

TABLE 4. COMPARISON OF PRE- AND POST-DISCHARGE
TRICOLIA, INFAUNAL, AND DIALID ASSEMBLAGES IN MĀMALA BAY, O'AHU

	Pre- Discharge	Std. Dev.	Post- Discharge	Std. Dev.
No. Samples	30		51	
% <u>Tricolia</u> Assemblage	60		28	
% Infaunal Assemblage	10		45	
% Dialid Assemblage	30		28	
No./cm ³ <u>Tricolia</u> Assemb.	19.3 ± 17.4		20.9 ± 7.6	
No./cm ³ Infaunal Assemb.	31.4 ± 4.4		24.9 ± 13.9	
No./cm ³ Dialid Assemb.	36.3 ± 15.9		33.1 ± 13.7	
No./cm ³ 60-80 m samples	29.8 ± 16.6		21.2 ± 11.4	

both space and time. Summaries of station-assemblage types and the features of the assemblages under pre- and post-discharge conditions are shown in Tables 3 and 4.

Mean micromolluscan abundance is not significantly different ($p > 0.20$) either between control station 1 and discharge areas (stas. 6, 8, and 9 at 60-80 m) or between pre- and post-discharge stations ($p > 0.10$). Variation in abundance and species composition over the seven-year interval at stations 1, 8, and 10 are shown in Figure 4. Although there is considerable variation in total numbers, the components of the assemblages appear to vary relatively little over the sampling period.

Samples of the Tricolia assemblage were the most frequently occurring of the assemblages under pre-discharge conditions, recorded at five of the six pre-discharge stations (the Tricolia assemblage was not recorded at sta. 6), and subsequently at stations 13 and 16 but not at stations 17, 18, or 19. The Tricolia assemblage was consistently recorded at control station 1 during the five sampling years. Samples representing the assemblage were found in only two (21%) of the nine samples from 60 to 80 m depths under pre-discharge conditions and in three (22%) of 14 samples of post-discharge samples at the same depths.

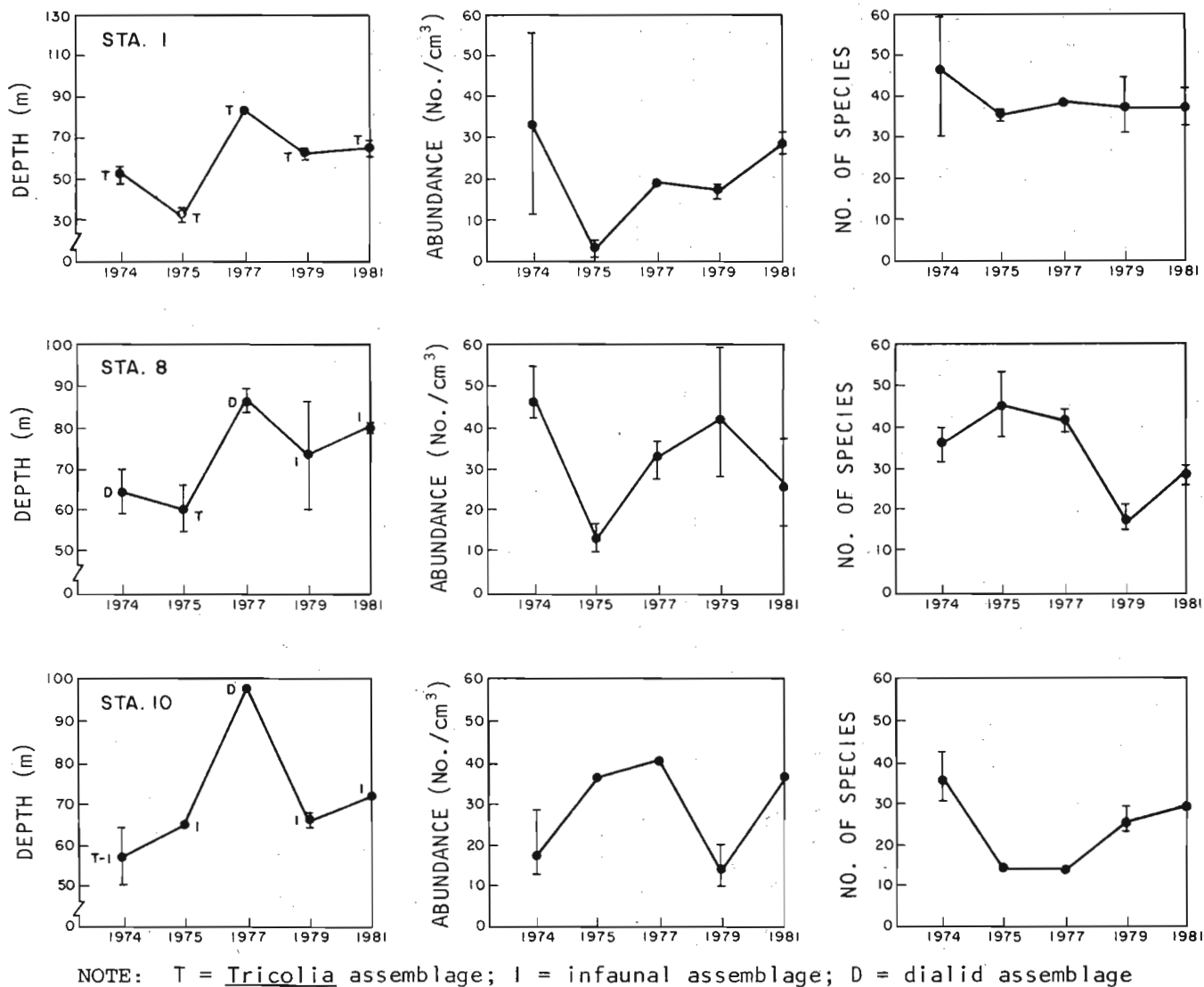


Figure 4. Variation in depth, abundance, number of species, and proportions of *Tricolia* and infaunal mollusks at stations 1, 8, and 10, 1974-1981

Samples representing the infaunal assemblage were least frequent among the assemblages under pre-discharge conditions, comprising 14% (four) of the samples, but they make up 50% of the post-discharge samples. The four pre-discharge infaunal samples came from stations 9 and 10, and the assemblage was subsequently recorded at some time during the remainder of the sampling program at all stations except for stations 18 and 1.

As indicated above, samples of the infaunal assemblage are closely associated with Pinna beds. There is evidence, either in the form of fragments or larval shells, that Pinna was present at some point at all the monitored stations between 1974 and 1981, but that it was found more frequently under post-discharge conditions than during pre-discharge (χ^2 test, $p = < 0.01$).

The dialid assemblage occurred in 25% of the pre-discharge samples and 23% of the post-discharge samples, but this difference is not significant. Samples representing the assemblage were found at seven of the 11 stations but were not recorded at stations 13, 16, or 1. The assemblage was recognized in all of the 60 to 80 m pre-discharge samples, including the sample (748C) dredged from the future diffuser site, and all of the post-discharge samples from the same depths.

Submersible-Collected Samples

Thirteen samples were obtained by submersible-operated grab from the vicinity of the diffuser ports and from the ZID boundary in November 1982. The samples cluster into two groups at about the 40% level of similarity (Fig. 2), one assemblage comprising the Tricolia assemblage, the other the dialid assemblage. The six samples from the diffuser ports are all representative of the dialid assemblage, and the seven samples from the ZID boundary are all representative of the Tricolia assemblage. Differences in average abundance, species richness and species diversity from those of the assemblages recorded during the monitoring program are not significant (Table 5).

TABLE 5. DIALID AND TRICOLIA ASSEMBLAGE SUBMERSIBLE-COLLECTED SAMPLES, MĀMALA BAY, O'AHU, 1982

	Dialid	Std. Dev.	<u>Tricolia</u>	Std. Dev.
No. of Samples	6	....	7	...
Depth (m)	72		72	
No./cm ³	33.4	16.9	23.2	9.6
No. of species	26.8	3.2	36.2	12.1
Species Diversity	2.2	0.15	2.8	0.22
Dominance*	42.1	4.03	29.7	3.74
SPECIES COMPOSITION (%)				
<u>Tricolia variabilis</u> *	0.16	0.18	10.7	5.9
Rissoidae*	8.3	3.4	19.5	6.6
Dialidae*	72.5	5.0	27.3	9.2
<u>Balcis</u> *	8.1	59.9	1.5	1.6
Infauna	3.6	1.9	5.7	2.8
<u>Finella pupoides</u> †	50.0			

*Significantly different at 95% level based on t-tests.

†Frequency of occurrence rather than percent composition.

DISCUSSION

The purpose of this study is to attempt to determine the effect of the introduction of sewage effluent on the benthic fauna in Māmala Bay. The data suggest no major changes in the benthos have occurred with the construction and operation of the diffuser: the same three micromolluscan assemblages identified under pre-discharge conditions are present post-discharge. There are, however, differences in the proportions of occurrence of the assemblage (the increasing numbers of infaunal assemblage samples compared with Tricolia and dialid assemblage samples) and some differences in abundance. The systems appear to be naturally variable, however, and some of that variability may well be reflected under post-discharge conditions. On the other hand, these differences may also be associated with the effects of sewage effluent, which may change sediment patterns and in turn be reflected in the assemblage types. It is only by continued moni-

toring that the determination can be made. For purposes of this report, however, the three assemblages display a number of features which provide for a characterization of the benthos of Māmala Bay.

The relatively high association among the different samples distinguished by cluster analysis and the correspondence of three discrete assemblages with major sampling areas in Māmala Bay indicate that the death assemblages in the sediments are homogeneous assemblages and do not reflect anomalous faunas produced by large-scale mixing of shells after death. Whether the assemblages can eventually be identified as communities sensu Peterson will depend on the recurrence of such groups at other locations under comparable environmental conditions, the demonstration of community boundaries along gradual environmental gradients, and the identification of spatial and trophic habits of the dominant constituents of the associations.

Benthic communities are generally considered to be distributed in a continuum with the specific organisms present and their relative abundances varying in conjunction with gradual changes along environmental gradients (Johnson 1971). The resulting continuum of species distribution implies the absence of precise boundaries separating the communities except where they form a natural or habitat separation. If, as has been established for other benthic communities, the nature of the substrate is an important factor in governing differences among faunal assemblages (since temperature and salinity do not vary greatly subtidally), then not only would the distribution of the three micromolluscan assemblages in Māmala Bay suggest a continuum, but several features of the components of the assemblages may be related to differences in characteristics of the sample stations.

The dominant components of the Tricolia assemblage are the algal-associated Tricolia itself and the microherbivorous rissoids which are usually associated with rubble. The sublittoral Tricolia assemblage is clearly derivative of the fringing reef which borders most of Māmala Bay, and it has been shown elsewhere (Kay 1983) that there is continuous gradient of Tricolia and its associated species from the surf-line on the reef to depths of 100 m. On this gradient the percentage of Tricolia ranges from 25% near the shoreward edge of the reef to 1% at depths of 100 m. Dollar's (1981) report of algae at 70 m would support the thesis that the Tricolia assemblage can be supported at these depths.

The infaunal assemblage is a different type of assemblage in that it is

comprised of an array not only of different feeding types, but of forms which have different spatial habits within the benthos itself. Its clear association with beds of the bivalve Pinna provide further evidence of its infaunal characteristics and suggest different sediment characteristics from those associated with Tricolia.

Little can be said at present about the habits of the components of the dialid assemblage which is perhaps more notable for what it lacks than for what is present. But the characteristics of the assemblage, with relatively high abundance, high dominance, and low species diversity suggest an association of eurytopic species. The occurrence of the dialid assemblage as the only assemblage type in the vicinity of the diffuser would appear to confirm this aspect of the assemblage.

Several anomalies and prospects remain for further analysis. First, a major anomaly is that of the exclusive occurrence in 1982 of dialid assemblage samples near the diffuser and the exclusive occurrence of Tricolia assemblage samples in the ZID boundary area. What happened to the Pinna beds which were so frequently sampled in 1981 and why was there no evidence of these beds in the region of the diffuser in 1982? Second, no attempt was made during this study to relate sediment characteristics to the assemblages, but this can be done in the future by utilizing the stored samples from the 1974 to 1981 monitoring program and thus answer these questions. Third, the monitoring pattern which has now been set up shows station 1, opposite Diamond Head, to be consistently different from the other stations. For purposes of further monitoring, it would seem more realistic to establish station 19 at a depth of about 70 m as the control station.

SUMMARY

1. Micromolluscan assemblages were sampled at 11 stations in Māhala Bay between 1974 and 1981 and near the diffuse itself and ZID boundary in November 1982. Above 32,000 specimens of mollusks were counted, representing nearly 100 species. Abundance (range from 2 shells/cm³ to 58 shells/cm³) tends to increase with depth but the correlation is not significant. Number of species (range from 10 to 61) and species diversity (H', range from 1.9 to 4.1) decrease with depth.

2. Mean micromolluscan abundance is not significantly different either between control station 1 and discharge areas, or between pre-discharge and post-discharge stations.
3. Three micromolluscan assemblages were identified by cluster analysis, the assemblages distinguished on the basis of species composition, abundance, species diversity and dominance. The Tricolia assemblage (dominants Tricolia and rissoids) is primarily an algal and rubble associated assemblage of microherbivores which is clearly derivative of the reef environment. The infaunal assemblage (dominants are four species of dialids with a significant number of accessory species which are carnivorous, parasitic, and deposit feeders, and some which are infaunal) is clearly associated with the occurrence of beds of the bivalve Pinna. The dialid assemblage has highest abundance and dominance and lowest species diversity, but the habits of the animals are not known.
4. Under pre-discharge conditions, samples of the Tricolia assemblage were the most frequently occurring of the assemblages and under post-discharge conditions samples of the infaunal assemblage are the most frequently occurring of the assemblages. In November 1982 only samples of the dialid assemblage were found near the diffuser itself and only samples of the Tricolia assemblage were found in the ZID boundary area.
5. It is suggested that the micromolluscan assemblages in Māmala Bay exhibit many features of other benthic communities in that they appear to be distributed in a continuum throughout the bay and their boundaries may be associated with different types of sediment. No major changes in the benthos associated with the introduction of sewage effluent can be detected, but variations in the pattern may occur because of changes in sediments associated with diffuser activity.

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APPENDIX TABLE A.1. LIST OF ABBREVIATIONS FOR SCIENTIFIC NAMES OF MOLLUSCS IN MĀMALA BAY, O'AHU, SEDIMENT SAMPLES, 1974-1982

Abbrev.	Species Name	Abbrev.	Species Name
ACTE	<i>Acteocina</i>	MERL	<i>Merelina granulata</i>
ALAB	<i>Styliferina goniochila</i>	MITF	<i>Mitrella fusiformis</i>
ALVA	<i>Sansonia kenneyi</i>	MITR	<i>M. rorida</i>
ATYS	<i>Atys</i> spp.	MORU	muricids and thaidids
BALC	<i>Balcis</i> spp.	NATI	<i>Natica</i> spp.
BARB	<i>Barbatia</i> spp.	ODOS	<i>Odostomia</i> spp.
BARL	<i>Barleeia calcarea</i>	OIND	<i>O. indica</i>
BITH	<i>Isselia hiloense</i>	OPAT	<i>O. patricia</i>
BITI	<i>Bittium impendens</i>	ORBI	<i>Orbitestella regina</i>
BITP	<i>B. parvum</i>	OSTR	<i>Ostrea</i>
BITZ	<i>B. zebrum</i>	OTHE	Unidentified
BOTH	Unidentified bivalves	PARA	<i>Parashiela beetsi</i>
BRAC	<i>Brachidontes crebristriatus</i>	PERP	<i>Cerithidium perparvulum</i>
BRYA	<i>Modiolus bryanae</i>	PLAN	<i>Planaxis</i> spp.
CAEC	<i>Caecum</i> spp.	PUPA	<i>Pupa</i> spp.
CARI	<i>Carinapex minutissimus</i>	PYRA	pyramidellids
CERI	<i>Cerithiopsis</i>	RAMB	<i>Rissoina ambigua</i>
CERT	<i>Cerithium</i> spp.	REPH	<i>R. ephamilla</i>
CHLA	<i>Chlamys</i> spp.	RHON	<i>R. honoluluensis</i>
CITH	<i>Vitricithna marmorata</i>	RMIL	<i>R. miltozona</i>
COND	Small bivalve	ROCH	<i>Rochefortina</i>
CTEN	<i>Ctena bella</i>	RTRI	<i>Rissoina triticea</i>
DIPL	<i>Cerithidium diplax</i>	RTUR	<i>R. turricula</i>
EMSC	<i>Emarginula</i> spp.	SCAL	<i>Scaliola</i> spp.
EPIT	<i>Epitonium</i> spp.	SCOP	<i>Diala scopulorum</i>
EUCH	<i>Euchelus</i> spp.	SMIT	<i>Seminella smithi</i>
FINE	<i>Finella pupoides</i>	STRE	<i>Strebloceras annulatum</i>
FOSS	<i>Fossarina marmorea</i>	SVAR	<i>Seiminella varia</i>
FULV	<i>Argyropeza</i> spp.	SYNA	<i>Synaptochlea concinna</i>
HAUR	<i>Haurakia isolata</i>	TELL	<i>Tellina</i> spp.
HELI	<i>Heliacus</i> spp.	TERE	<i>Terebra</i> spp.
HEMI	<i>Hemicardium fragum</i>	THAL	<i>Thalotia rubra</i>
HIPP	<i>Hipponix</i> spp.	TRIC	<i>Tricolia variabilis</i>
KANE	<i>Kaneoha</i> and other erycinids	TRIP	<i>Triphora</i> spp.
KOGO	marginellids	TURB	<i>Turbo sandwicensis</i>
LEPR	<i>Leptothyra rubricincta</i>	TURR	<i>Turrid</i> spp.
LEPT	<i>L. verruca</i>	VARI	<i>Diala varia</i>
LIMO	<i>Limopsis</i> spp.	WILL	<i>Williamia radiata</i>
LOPH	<i>Lophocochlias minutissimus</i>	ZEBI	<i>Zebina</i> spp.

NOTE: Species abbreviations used for SAS Master File (Micromollusc Data Entry).

APPENDIX TABLE A.2. SAS MASTER FILE DATA ENTRY FORM

COLUMN →	1	2	3	4	5	6	7	8	9	•	•	•
LINE												
↓												
1	S	I	T	E	(column 5 always blank)	Enter site name, begin in column 6						
2	D	A	T	E		Enter date of sample collection						
3	S	T	A	N		Enter station name						
4	R	E	P	L		Enter replicate as a <u>number</u> *						
5	D	E	P	H		Station depth in feet						
6	E	C	O	R		UTM east coordinate ÷ 10						
7	N	C	O	R		UTM north coordinate - 2350000						
8	O	D	E	M		Oxygen demand of sediment						
9	T	K	N	I		Total Kjeldahl nitrogen of sediment						
10	T	O	T	P		Total phosphorus of sediment						
11	T	O	T	S		Total sulfide of sediment						
	V	O	L	U		Sample volume (°C)						
12	E	M	S	C		Abundance						
13	A	L	C	Y		•						
14	F	O	S	S	•							
•	•	•	•	•	•							
•	•	•	•	•	•							
•	•	•	•	•	•							
	Continue with spp. abbrevs.											

NOTES:

1. Enter all data starting in Column 6.
2. Use period (•) for missing data (zero abundance).

APPENDIX TABLE A.3. SAS MASTER FILE DATA ENTRY

1. LOGON IBM SYSTEM Class: IBM
p2LOGON T043680/PASSWD
 2. CEDIT filename (e.g., HONOULI.P82.DATA)
 3. Enter input mode of CEDITOR by typing a carriage return (CR)
 4. Enter data as described in Appendix Table A.2
 5. SAVE
 6. END ceditor session
 7. PRINTX filename to obtain printed copy
 8. Check data file for errors and edit as needed
 9. Update master file by using the following:
SAS SAVE (HONOULI.SASAV) DATA (filename)
TIME (120S) SYSIN (SASUPDAT.DATA) BATCH
 10. Update selected SPECIES file by
ALLOC FI (SAVEX) DS (SPECINDX.SASAV) OLD
SAS SAVE (HONOULI.SASAV) SYSIN (SASINGRP.DATA)
 11. SAS SAVE SPEDINDX.SASAV) SYSIN (SASINDEX.DATA)
BATCH
 12. PRINT SPEGRP.INDEX
-
3. Leave one blank between each data value.
 4. Omit lines for species which do not occur at any station.
 5. There must be 12 data values in each line except the first 2; use periods where there are fewer than 12 stations in the data set.

APPENDIX TABLE A.4. SAS MASTER FILE: MICROMOLLUSC DATA

MICROMOLLUSC MASTER DATA FILE											21:35 MONDAY, JUNE 13, 1983		28	
OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	DXDEMAND	TKN	TOTALP	TOTALSQL	REPL	STATION	VOL
12	1514	MAMALA	01 JUN74	EMSC	3	618600	2353350	157	.	.	.	1	M1	17
13	1515	MAMALA	01 JUN74	ALCY	26	618600	2353350	157	.	.	.	1	M1	17
14	1516	MAMALA	01 JUN74	LEPT	1	618600	2353350	157	.	.	.	1	M1	17
15	1517	MAMALA	01 JUN74	SYNA	4	618600	2353350	157	.	.	.	1	M1	17
16	1518	MAMALA	01 JUN74	TRIC	183	618600	2353350	157	.	.	.	1	M1	17
17	1519	MAMALA	01 JUN74	BARL	4	618600	2353350	157	.	.	.	1	M1	17
18	1520	MAMALA	01 JUN74	MERL	6	618600	2353350	157	.	.	.	1	M1	17
19	1521	MAMALA	01 JUN74	RAMB	7	618600	2353350	157	.	.	.	1	M1	17
20	1522	MAMALA	01 JUN74	RMIL	4	618600	2353350	157	.	.	.	1	M1	17
21	1523	MAMALA	01 JUN74	REPH	13	618600	2353350	157	.	.	.	1	M1	17
22	1524	MAMALA	01 JUN74	RHON	1	618600	2353350	157	.	.	.	1	M1	17
23	1525	MAMALA	01 JUN74	CITH	191	618600	2353350	157	.	.	.	1	M1	17
24	1526	MAMALA	01 JUN74	PARA	35	618600	2353350	157	.	.	.	1	M1	17
25	1527	MAMALA	01 JUN74	ALVA	4	618600	2353350	157	.	.	.	1	M1	17
26	1528	MAMALA	01 JUN74	HAPL	12	618600	2353350	157	.	.	.	1	M1	17
27	1529	MAMALA	01 JUN74	QRBR	19	618600	2353350	157	.	.	.	1	M1	17
28	1530	MAMALA	01 JUN74	QRBI	6	618600	2353350	157	.	.	.	1	M1	17
29	1531	MAMALA	01 JUN74	CAEC	6	618600	2353350	157	.	.	.	1	M1	17
30	1532	MAMALA	01 JUN74	STRE	1	618600	2353350	157	.	.	.	1	M1	17
31	1533	MAMALA	01 JUN74	BITP	1	618600	2353350	157	.	.	.	1	M1	17
32	1534	MAMALA	01 JUN74	GITI	1	618600	2353350	157	.	.	.	1	M1	17
33	1535	MAMALA	01 JUN74	CERT	8	618600	2353350	157	.	.	.	1	M1	17
34	1536	MAMALA	01 JUN74	PERP	90	618600	2353350	157	.	.	.	1	M1	17
35	1537	MAMALA	01 JUN74	DIPL	47	618600	2353350	157	.	.	.	1	M1	17
36	1538	MAMALA	01 JUN74	DIAL	17	618600	2353350	157	.	.	.	1	M1	17
37	1539	MAMALA	01 JUN74	SCOP	3	618600	2353350	157	.	.	.	1	M1	17
38	1540	MAMALA	01 JUN74	FULV	4	618600	2353350	157	.	.	.	1	M1	17
39	1541	MAMALA	01 JUN74	ALAB	1	618600	2353350	157	.	.	.	1	M1	17
40	1542	MAMALA	01 JUN74	SCAL	24	618600	2353350	157	.	.	.	1	M1	17
41	1543	MAMALA	01 JUN74	CERI	4	618600	2353350	157	.	.	.	1	M1	17
42	1544	MAMALA	01 JUN74	TRIP	35	618600	2353350	157	.	.	.	1	M1	17
43	1545	MAMALA	01 JUN74	HELI	4	618600	2353350	157	.	.	.	1	M1	17
44	1546	MAMALA	01 JUN74	BALC	2	618600	2353350	157	.	.	.	1	M1	17
45	1547	MAMALA	01 JUN74	HIPP	7	618600	2353350	157	.	.	.	1	M1	17
46	1548	MAMALA	01 JUN74	NATI	5	618600	2353350	157	.	.	.	1	M1	17
47	1549	MAMALA	01 JUN74	OTHE	22	618600	2353350	157	.	.	.	1	M1	17
48	1550	MAMALA	01 JUN74	KOGO	9	618600	2353350	157	.	.	.	1	M1	17
49	1551	MAMALA	01 JUN74	MITF	1	618600	2353350	157	.	.	.	1	M1	17
50	1552	MAMALA	01 JUN74	SMIT	3	618600	2353350	157	.	.	.	1	M1	17
51	1553	MAMALA	01 JUN74	VARI	6	618600	2353350	157	.	.	.	1	M1	17
52	1554	MAMALA	01 JUN74	MITR	1	618600	2353350	157	.	.	.	1	M1	17
53	1555	MAMALA	01 JUN74	HAMI	2	618600	2353350	157	.	.	.	1	M1	17
54	1556	MAMALA	01 JUN74	MURU	3	618600	2353350	157	.	.	.	1	M1	17
55	1557	MAMALA	01 JUN74	OIND	2	618600	2353350	157	.	.	.	1	M1	17
56	1558	MAMALA	01 JUN74	OPAT	1	618600	2353350	157	.	.	.	1	M1	17
57	1559	MAMALA	01 JUN74	GDOS	10	618600	2353350	157	.	.	.	1	M1	17
58	1560	MAMALA	01 JUN74	ACTE	7	618600	2353350	157	.	.	.	1	M1	17
59	1561	MAMALA	01 JUN74	ATYS	1	618600	2353350	157	.	.	.	1	M1	17
60	1562	MAMALA	01 JUN74	WILL	2	618600	2353350	157	.	.	.	1	M1	17
61	1563	MAMALA	01 JUN74	CHLA	1	618600	2353350	157	.	.	.	1	M1	17
62	1564	MAMALA	01 JUN74	ROCH	25	618600	2353350	157	.	.	.	1	M1	17
63	1565	MAMALA	01 JUN74	OSTR	2	618600	2353350	157	.	.	.	1	M1	17
64	1566	MAMALA	01 JUN74	BRYA	10	618600	2353350	157	.	.	.	1	M1	17
65	1567	MAMALA	01 JUN74	TELL	8	618600	2353350	157	.	.	.	1	M1	17
66	1568	MAMALA	01 JUN74	HEMI	11	618600	2353350	157	.	.	.	1	M1	17

MICROMOLLUSC MASTER DATA FILE

21:35 MONDAY, JUNE 13, 1983 29

OBS	LOCATION	DATE	SPECIES	ABUND	ECORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
1569	MAMALA	01JUN74	LIMO	4	618600	2353350	157	.	.	.	.	1	M1	17
1570	MAMALA	01JUN74	COND	1	618600	2353350	157	.	.	.	.	1	M1	17
1571	MAMALA	01JUN74	BOTH	2	618600	2353350	157	.	.	.	.	1	M1	17
1572	MAMALA	01JUN74	CTEN	1	618600	2353350	157	.	.	.	.	1	M1	17
1573	MAMALA	01JUN74	EUCH	4	618600	2353350	157	.	.	.	.	1	M1	17
1574	MAMALA	01JUN74	PYRD	5	618600	2353350	157	.	.	.	.	1	M1	17
1575	MAMALA	01JUN74	ALCY	3	612220	2354150	243	.	.	.	.	1	M10	25
1576	MAMALA	01JUN74	TRIC	24	612220	2354150	243	.	.	.	.	1	M10	25
1577	MAMALA	01JUN74	RHON	1	612220	2354150	243	.	.	.	.	1	M10	25
1578	MAMALA	01JUN74	CITH	29	612220	2354150	243	.	.	.	.	1	M10	25
1579	MAMALA	01JUN74	PARA	4	612220	2354150	243	.	.	.	.	1	M10	25
1580	MAMALA	01JUN74	HAPL	8	612220	2354150	243	.	.	.	.	1	M10	25
1581	MAMALA	01JUN74	DRBR	19	612220	2354150	243	.	.	.	.	1	M10	25
1582	MAMALA	01JUN74	ORB1	1	612220	2354150	243	.	.	.	.	1	M10	25
1583	MAMALA	01JUN74	CAEC	5	612220	2354150	243	.	.	.	.	1	M10	25
1584	MAMALA	01JUN74	STRE	1	612220	2354150	243	.	.	.	.	1	M10	25
1585	MAMALA	01JUN74	BITP	3	612220	2354150	243	.	.	.	.	1	M10	25
1586	MAMALA	01JUN74	PERP	38	612220	2354150	243	.	.	.	.	1	M10	25
1587	MAMALA	01JUN74	DIPL	10	612220	2354150	243	.	.	.	.	1	M10	25
1588	MAMALA	01JUN74	DIAL	1	612220	2354150	243	.	.	.	.	1	M10	25
1589	MAMALA	01JUN74	ALAB	6	612220	2354150	243	.	.	.	.	1	M10	25
1590	MAMALA	01JUN74	SCAL	10	612220	2354150	243	.	.	.	.	1	M10	25
1591	MAMALA	01JUN74	TRIP	3	612220	2354150	243	.	.	.	.	1	M10	25
1592	MAMALA	01JUN74	HIPP	1	612220	2354150	243	.	.	.	.	1	M10	25
1593	MAMALA	01JUN74	KDGO	4	612220	2354150	243	.	.	.	.	1	M10	25
1594	MAMALA	01JUN74	OPAT	1	612220	2354150	243	.	.	.	.	1	M10	25
1595	MAMALA	01JUN74	ACTE	2	612220	2354150	243	.	.	.	.	1	M10	25
1596	MAMALA	01JUN74	BARB	1	612220	2354150	243	.	.	.	.	1	M10	25
1597	MAMALA	01JUN74	CHLA	1	612220	2354150	243	.	.	.	.	1	M10	25
1598	MAMALA	01JUN74	TELL	3	612220	2354150	243	.	.	.	.	1	M10	25
1599	MAMALA	01JUN74	HEM1	1	612220	2354150	243	.	.	.	.	1	M10	25
1600	MAMALA	01JUN74	LIMO	1	612220	2354150	243	.	.	.	.	1	M10	25
1601	MAMALA	01JUN74	COND	2	612220	2354150	243	.	.	.	.	1	M10	25
1602	MAMALA	01JUN74	BOTH	1	612220	2354150	243	.	.	.	.	1	M10	25
1603	MAMALA	01JUN74	LEPR	3	612220	2354150	243	.	.	.	.	1	M10	25
1604	MAMALA	01JUN74	TRIC	7	614500	2354300	256	.	.	.	.	1	M6	25
1605	MAMALA	01JUN74	PYRA	1	614500	2354300	256	.	.	.	.	1	M6	25
1606	MAMALA	01JUN74	REPH	3	614500	2354300	256	.	.	.	.	1	M6	25
1607	MAMALA	01JUN74	RHON	16	614500	2354300	256	.	.	.	.	1	M6	25
1608	MAMALA	01JUN74	CITH	36	614500	2354300	256	.	.	.	.	1	M6	25
1609	MAMALA	01JUN74	PARA	13	614500	2354300	256	.	.	.	.	1	M6	25
1610	MAMALA	01JUN74	HAPL	2	614500	2354300	256	.	.	.	.	1	M6	25
1611	MAMALA	01JUN74	DRBR	2	614500	2354300	256	.	.	.	.	1	M6	25
1612	MAMALA	01JUN74	ORB1	1	614500	2354300	256	.	.	.	.	1	M6	25
1613	MAMALA	01JUN74	CAEC	2	614500	2354300	256	.	.	.	.	1	M6	25
1614	MAMALA	01JUN74	POWL	5	614500	2354300	256	.	.	.	.	1	M6	25
1615	MAMALA	01JUN74	CERT	3	614500	2354300	256	.	.	.	.	1	M6	25
1616	MAMALA	01JUN74	PERP	52	614500	2354300	256	.	.	.	.	1	M6	25
1617	MAMALA	01JUN74	DIPL	4	614500	2354300	256	.	.	.	.	1	M6	25
1618	MAMALA	01JUN74	DIAL	59	614500	2354300	256	.	.	.	.	1	M6	25
1619	MAMALA	01JUN74	SCOP	69	614500	2354300	256	.	.	.	.	1	M6	25
1620	MAMALA	01JUN74	ALAB	2	614500	2354300	256	.	.	.	.	1	M6	25
1621	MAMALA	01JUN74	SCAL	16	614500	2354300	256	.	.	.	.	1	M6	25
1622	MAMALA	01JUN74	TRIP	11	614500	2354300	256	.	.	.	.	1	M6	25
1623	MAMALA	01JUN74	BALC	6	614500	2354300	256	1	M6	25
1624	MAMALA	01JUN74	KDGO	3	614500	2354300	256	1	M6	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
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1625	MAMALA	01JUN74	MITM	1	614500	2354300	256	1	M6	25
1626	MAMALA	01JUN74	VAR1	1	614500	2354300	256	1	M6	25
1627	MAMALA	01JUN74	CARI	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1628	MAMALA	01JUN74	TURN	3	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1629	MAMALA	01JUN74	ACTE	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1630	MAMALA	01JUN74	ROCH	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1631	MAMALA	01JUN74	USTR	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1632	MAMALA	01JUN74	TELL	3	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1633	MAMALA	01JUN74	LIMO	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1634	MAMALA	01JUN74	BUTH	2	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1635	MAMALA	01JUN74	EUCH	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1636	MAMALA	01JUN74	HYRD	1	614500	2354300	256	.	.	.	.	.	.	1	M6	25
1637	MAMALA	01JUN74	TRIC	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1638	MAMALA	01JUN74	UARL	3	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1639	MAMALA	01JUN74	MERL	2	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1640	MAMALA	01JUN74	RMIL	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1641	MAMALA	01JUN74	REPH	2	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1642	MAMALA	01JUN74	RHUN	2	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1643	MAMALA	01JUN74	CITH	31	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1644	MAMALA	01JUN74	PARA	6	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1645	MAMALA	01JUN74	HAPL	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1646	MAMALA	01JUN74	URBR	6	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1647	MAMALA	01JUN74	ORBI	2	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1648	MAMALA	01JUN74	CAEC	8	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1649	MAMALA	01JUN74	POWL	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1650	MAMALA	01JUN74	CERT	3	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1651	MAMALA	01JUN74	PERP	9	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1652	MAMALA	01JUN74	DIPL	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1653	MAMALA	01JUN74	DIAL	6	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1654	MAMALA	01JUN74	SCOP	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1655	MAMALA	01JUN74	ALAB	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1656	MAMALA	01JUN74	SCAL	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1657	MAMALA	01JUN74	TRIP	2	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1658	MAMALA	01JUN74	HIPP	9	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1659	MAMALA	01JUN74	DTGE	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1660	MAMALA	01JUN74	KUGO	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1661	MAMALA	01JUN74	TURR	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1662	MAMALA	01JUN74	MITR	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1663	MAMALA	01JUN74	QBAT	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1664	MAMALA	01JUN74	ODUS	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1665	MAMALA	01JUN74	ATYS	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1666	MAMALA	01JUN74	WILL	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1667	MAMALA	01JUN74	HARB	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1668	MAMALA	01JUN74	ROCH	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1669	MAMALA	01JUN74	QSTR	8	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1670	MAMALA	01JUN74	BRYA	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1671	MAMALA	01JUN74	TELL	12	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1672	MAMALA	01JUN74	HEMI	2	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1673	MAMALA	01JUN74	LIMO	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1674	MAMALA	01JUN74	BUTH	4	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1675	MAMALA	01JUN74	CTEN	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1676	MAMALA	01JUN74	EUCH	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1677	MAMALA	01JUN74	TRDC	1	613300	2354650	305	.	.	.	.	.	.	1	M7	25
1678	MAMALA	01JUN74	ALCY	1	613300	2354210	230	.	.	.	.	.	.	1	M8	25
1679	MAMALA	01JUN74	TRIC	10	613300	2354210	230	1	M8	25
1680	MAMALA	01JUN74	BARL	1	613300	2354210	230	1	M8	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
1681	MAMALA	01JUN74	RMIL	1	613300	2354210	230	.	.	.	.	.	M8	25
1682	MAMALA	01JUN74	REPH	20	613300	2354210	230	.	.	.	.	.	M8	25
1683	MAMALA	01JUN74	RHUN	57	613300	2354210	230	.	.	.	.	.	M8	25
1684	MAMALA	01JUN74	CITH	29	613300	2354210	230	.	.	.	.	.	M8	25
1685	MAMALA	01JUN74	PARA	35	613300	2354210	230	.	.	.	.	.	M8	25
1686	MAMALA	01JUN74	ALVA	1	613300	2354210	230	.	.	.	.	.	M8	25

1687	MAMALA	01JUN74	CAEC	18	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1688	MAMALA	01JUN74	STKE	3	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1689	MAMALA	01JUN74	POWL	122	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1690	MAMALA	01JUN74	CERT	9	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1691	MAMALA	01JUN74	PERP	189	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1692	MAMALA	01JUN74	DIPL	3	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1693	MAMALA	01JUN74	DIAL	174	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1694	MAMALA	01JUN74	SCOP	502	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1695	MAMALA	01JUN74	SCAL	115	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1696	MAMALA	01JUN74	CERI	6	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1697	MAMALA	01JUN74	TRIP	63	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1698	MAMALA	01JUN74	EPII	1	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1699	MAMALA	01JUN74	BALC	30	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1700	MAMALA	01JUN74	OTHE	2	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1701	MAMALA	01JUN74	CARI	4	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1702	MAMALA	01JUN74	TURR	8	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1703	MAMALA	01JUN74	MTRR	1	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1704	MAMALA	01JUN74	NDRU	1	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1705	MAMALA	01JUN74	DIND	4	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1706	MAMALA	01JUN74	UPAT	2	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1707	MAMALA	01JUN74	ODOS	4	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1708	MAMALA	01JUN74	ACTE	3	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1709	MAMALA	01JUN74	ATYS	2	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1710	MAMALA	01JUN74	WILL	1	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1711	MAMALA	01JUN74	OSTR	3	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1712	MAMALA	01JUN74	BRYA	2	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1713	MAMALA	01JUN74	TELL	3	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1714	MAMALA	01JUN74	LIMO	3	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1715	MAMALA	01JUN74	CTEN	7	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1716	MAMALA	01JUN74	PYRD	1	613300	2354210	230	.	.	.	.	.	.	1	MB	25
1717	MAMALA	01JUN74	TRIC	9	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1718	MAMALA	01JUN74	BARL	7	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1719	MAMALA	01JUN74	REPH	1	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1720	MAMALA	01JUN74	CITH	11	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1721	MAMALA	01JUN74	PARA	6	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1722	MAMALA	01JUN74	HAPL	2	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1723	MAMALA	01JUN74	DRBR	2	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1724	MAMALA	01JUN74	CERT	1	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1725	MAMALA	01JUN74	PERE	36	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1726	MAMALA	01JUN74	DIAL	26	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1727	MAMALA	01JUN74	SCOP	75	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1728	MAMALA	01JUN74	FULV	155	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1729	MAMALA	01JUN74	SCAL	14	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1730	MAMALA	01JUN74	CERI	1	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1731	MAMALA	01JUN74	TRIP	5	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1732	MAMALA	01JUN74	HELI	2	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1733	MAMALA	01JUN74	EPII	4	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1734	MAMALA	01JUN74	BALC	57	613500	2353700	354	.	.	.	.	.	.	1	M9	25
1735	MAMALA	01JUN74	NATI	2	613500	2353700	354	1	M9	25
1736	MAMALA	01JUN74	KOGO	2	613500	2353700	354	1	M9	25

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OBS	LOCATION	DATE	SPECIES	ABUND	LCORRD	NCORRD	DEPTH	QXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
1737	MAMALA	01JUN74	TURR	2	613500	2353700	354	.	.	.	.	1	M9	25
1738	MAMALA	01JUN74	HAMI	1	613500	2353700	354	.	.	.	.	1	M9	25
1739	MAMALA	01JUN74	DIND	1	613500	2353700	354	.	.	.	.	1	M9	25
1740	MAMALA	01JUN74	ODOS	12	613500	2353700	354	.	.	.	.	1	M9	25
1741	MAMALA	01JUN74	ACTE	20	613500	2353700	354	.	.	.	.	1	M9	25
1742	MAMALA	01JUN74	BRYA	2	613500	2353700	354	.	.	.	.	1	M9	25
1743	MAMALA	01JUN74	TELL	7	613500	2353700	354	.	.	.	.	1	M9	25
1744	MAMALA	01JUN74	COND	1	613500	2353700	354	.	.	.	.	1	M9	25
1745	MAMALA	01JUN74	BOTH	2	613500	2353700	354	.	.	.	.	1	M9	25
1746	MAMALA	01JUN74	CTEN	2	613500	2353700	354	.	.	.	.	1	M9	25
1747	MAMALA	01JUN74	PYRD	6	613500	2353700	354	.	.	.	.	1	M9	25
1748	MAMALA	01JUN74	FMSC	1	618600	2353350	177	.	.	.	.	2	M1	25

1749	MAMALA	01JUN74	SYNA	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1750	MAMALA	01JUN74	TRIC	49	618600	2353350	177	.	.	.	.	.	.	M1	25
1751	MAMALA	01JUN74	BARL	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1752	MAMALA	01JUN74	MEHL	12	618600	2353350	177	.	.	.	.	.	.	M1	25
1753	MAMALA	01JUN74	PWRL	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1754	MAMALA	01JUN74	RMIL	9	618600	2353350	177	.	.	.	.	.	.	M1	25
1755	MAMALA	01JUN74	REPH	9	618600	2353350	177	.	.	.	.	.	.	M1	25
1756	MAMALA	01JUN74	RHON	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1757	MAMALA	01JUN74	CITH	74	618600	2353350	177	.	.	.	.	.	.	M1	25
1758	MAMALA	01JUN74	PARA	6	618600	2353350	177	.	.	.	.	.	.	M1	25
1759	MAMALA	01JUN74	ZEBI	2	618600	2353350	177	.	.	.	.	.	.	M1	25
1760	MAMALA	01JUN74	ALVA	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1761	MAMALA	01JUN74	HAPL	4	618600	2353350	177	.	.	.	.	.	.	M1	25
1762	MAMALA	01JUN74	URBK	9	618600	2353350	177	.	.	.	.	.	.	M1	25
1763	MAMALA	01JUN74	DRBI	9	618600	2353350	177	.	.	.	.	.	.	M1	25
1764	MAMALA	01JUN74	CAEC	4	618600	2353350	177	.	.	.	.	.	.	M1	25
1765	MAMALA	01JUN74	BITH	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1766	MAMALA	01JUN74	PERP	121	618600	2353350	177	.	.	.	.	.	.	M1	25
1767	MAMALA	01JUN74	DIPL	6	618600	2353350	177	.	.	.	.	.	.	M1	25
1768	MAMALA	01JUN74	FULV	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1769	MAMALA	01JUN74	ALAB	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1770	MAMALA	01JUN74	SCAL	3	618600	2353350	177	.	.	.	.	.	.	M1	25
1771	MAMALA	01JUN74	CERI	4	618600	2353350	177	.	.	.	.	.	.	M1	25
1772	MAMALA	01JUN74	TRIP	30	618600	2353350	177	.	.	.	.	.	.	M1	25
1773	MAMALA	01JUN74	EPIT	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1774	MAMALA	01JUN74	BALC	8	618600	2353350	177	.	.	.	.	.	.	M1	25
1775	MAMALA	01JUN74	OTHE	4	618600	2353350	177	.	.	.	.	.	.	M1	25
1776	MAMALA	01JUN74	OPAT	4	618600	2353350	177	.	.	.	.	.	.	M1	25
1777	MAMALA	01JUN74	ODGS	9	618600	2353350	177	.	.	.	.	.	.	M1	25
1778	MAMALA	01JUN74	LEPR	26	618600	2353350	177	.	.	.	.	.	.	M1	25
1779	MAMALA	01JUN74	PYRD	1	618600	2353350	177	.	.	.	.	.	.	M1	25
1780	MAMALA	01JUN74	TRIC	7	612220	2354150	167	.	.	.	.	.	.	M10	25
1781	MAMALA	01JUN74	BARL	1	612220	2354150	167	.	.	.	.	.	.	M10	25
1782	MAMALA	01JUN74	REPH	9	612220	2354150	167	.	.	.	.	.	.	M10	25
1783	MAMALA	01JUN74	RHON	2	612220	2354150	167	.	.	.	.	.	.	M10	25
1784	MAMALA	01JUN74	CITH	24	612220	2354150	167	.	.	.	.	.	.	M10	25
1785	MAMALA	01JUN74	PARA	34	612220	2354150	167	.	.	.	.	.	.	M10	25
1786	MAMALA	01JUN74	ALVA	1	612220	2354150	167	.	.	.	.	.	.	M10	25
1787	MAMALA	01JUN74	CAEC	2	612220	2354150	167	.	.	.	.	.	.	M10	25
1788	MAMALA	01JUN74	POWL	44	612220	2354150	167	.	.	.	.	.	.	M10	25
1789	MAMALA	01JUN74	CERT	3	612220	2354150	167	.	.	.	.	.	.	M10	25
1790	MAMALA	01JUN74	PERP	168	612220	2354150	167	.	.	.	.	.	.	M10	25
1791	MAMALA	01JUN74	DIPL	6	612220	2354150	167	M10	25
1792	MAMALA	01JUN74	DIAL	96	612220	2354150	167	M10	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCORD	NCCORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
1793	MAMALA	01JUN74	SCOP	49	612220	2354150	167	.	.	.	.	.	M10	25
1794	MAMALA	01JUN74	FULV	110	612220	2354150	167	.	.	.	.	.	M10	25
1795	MAMALA	01JUN74	SCAL	51	612220	2354150	167	.	.	.	.	.	M10	25
1796	MAMALA	01JUN74	CERI	2	612220	2354150	167	.	.	.	.	.	M10	25
1797	MAMALA	01JUN74	TRIP	9	612220	2354150	167	.	.	.	.	.	M10	25
1798	MAMALA	01JUN74	EPIT	1	612220	2354150	167	.	.	.	.	.	M10	25
1799	MAMALA	01JUN74	BALC	40	612220	2354150	167	.	.	.	.	.	M10	25
1800	MAMALA	01JUN74	NATI	3	612220	2354150	167	.	.	.	.	.	M10	25
1801	MAMALA	01JUN74	KOGQ	4	612220	2354150	167	.	.	.	.	.	M10	25
1802	MAMALA	01JUN74	VARI	1	612220	2354150	167	.	.	.	.	.	M10	25
1803	MAMALA	01JUN74	TURR	3	612220	2354150	167	.	.	.	.	.	M10	25
1804	MAMALA	01JUN74	HARI	4	612220	2354150	167	.	.	.	.	.	M10	25
1805	MAMALA	01JUN74	DIND	5	612220	2354150	167	.	.	.	.	.	M10	25
1806	MAMALA	01JUN74	OPAT	2	612220	2354150	167	.	.	.	.	.	M10	25
1807	MAMALA	01JUN74	ODGS	3	612220	2354150	167	.	.	.	.	.	M10	25
1808	MAMALA	01JUN74	ACTE	13	612220	2354150	167	.	.	.	.	.	M10	25
1809	MAMALA	01JUN74	ATYS	2	612220	2354150	167	.	.	.	.	.	M10	25
1810	MAMALA	01JUN74	CHLA	2	612220	2354150	167	.	.	.	.	.	M10	25

1873	MAMALA	01 JUN 74	KOGU	2	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1874	MAMALA	01 JUN 74	TURR	3	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1875	MAMALA	01 JUN 74	OIND	4	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1876	MAMALA	01 JUN 74	ODUS	1	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1877	MAMALA	01 JUN 74	ACTE	7	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1878	MAMALA	01 JUN 74	ROCH	2	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1879	MAMALA	01 JUN 74	USTR	2	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1880	MAMALA	01 JUN 74	BRYA	5	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1881	MAMALA	01 JUN 74	TELL	1	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1882	MAMALA	01 JUN 74	COND	1	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1883	MAMALA	01 JUN 74	CTEN	2	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1884	MAMALA	01 JUN 74	PUPA	3	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1885	MAMALA	01 JUN 74	PYRD	12	613300	2354650	197	.	.	.	.	.	.	.	.	.	M7	25
1886	MAMALA	01 JUN 74	TRIC	16	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1887	MAMALA	01 JUN 74	BARL	10	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1888	MAMALA	01 JUN 74	MERL	1	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1889	MAMALA	01 JUN 74	REPH	1	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1890	MAMALA	01 JUN 74	RHON	5	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1891	MAMALA	01 JUN 74	CITH	92	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1892	MAMALA	01 JUN 74	PARA	74	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1893	MAMALA	01 JUN 74	ALVA	1	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1894	MAMALA	01 JUN 74	CAEC	9	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1895	MAMALA	01 JUN 74	POWL	7	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1896	MAMALA	01 JUN 74	BITZ	4	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1897	MAMALA	01 JUN 74	PERP	316	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1898	MAMALA	01 JUN 74	DIPL	1	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1899	MAMALA	01 JUN 74	DIAL	210	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1900	MAMALA	01 JUN 74	SCOP	35	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1901	MAMALA	01 JUN 74	FULV	38	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1902	MAMALA	01 JUN 74	SCAL	168	613300	2354210	230	.	.	.	.	.	.	.	.	.	M8	25
1903	MAMALA	01 JUN 74	CERI	4	613300	2354210	230	M8	25
1904	MAMALA	01 JUN 74	TRIP	25	613300	2354210	230	M8	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
1905	MAMALA	01 JUN 74	BALC	20	613300	2354210	230	.	.	.	.	.	M8	25
1906	MAMALA	01 JUN 74	NATI	2	613300	2354210	230	.	.	.	.	.	M8	25
1907	MAMALA	01 JUN 74	KOGU	2	613300	2354210	230	.	.	.	.	.	M8	25
1908	MAMALA	01 JUN 74	HAMI	5	613300	2354210	230	.	.	.	.	.	M8	25
1909	MAMALA	01 JUN 74	OIND	3	613300	2354210	230	.	.	.	.	.	M8	25
1910	MAMALA	01 JUN 74	ACTE	3	613300	2354210	230	.	.	.	.	.	M8	25
1911	MAMALA	01 JUN 74	ROCH	1	613300	2354210	230	.	.	.	.	.	M8	25
1912	MAMALA	01 JUN 74	OSTR	1	613300	2354210	230	.	.	.	.	.	M8	25
1913	MAMALA	01 JUN 74	BRYA	1	613300	2354210	230	.	.	.	.	.	M8	25
1914	MAMALA	01 JUN 74	TELL	9	613300	2354210	230	.	.	.	.	.	M8	25
1915	MAMALA	01 JUN 74	COND	1	613300	2354210	230	.	.	.	.	.	M8	25
1916	MAMALA	01 JUN 74	BOTH	1	613300	2354210	230	.	.	.	.	.	M8	25
1917	MAMALA	01 JUN 74	PUPA	2	613300	2354210	230	.	.	.	.	.	M8	25
1918	MAMALA	01 JUN 74	PYRD	1	613300	2354210	230	.	.	.	.	.	M8	25
1919	MAMALA	01 JUN 74	TRIC	1	613500	2353700	328	.	.	.	.	.	M9	25
1920	MAMALA	01 JUN 74	BARL	7	613500	2353700	328	.	.	.	.	.	M9	25
1921	MAMALA	01 JUN 74	PYRA	1	613500	2353700	328	.	.	.	.	.	M9	25
1922	MAMALA	01 JUN 74	RMIL	2	613500	2353700	328	.	.	.	.	.	M9	25
1923	MAMALA	01 JUN 74	REPH	1	613500	2353700	328	.	.	.	.	.	M9	25
1924	MAMALA	01 JUN 74	RHON	1	613500	2353700	328	.	.	.	.	.	M9	25
1925	MAMALA	01 JUN 74	CITH	51	613500	2353700	328	.	.	.	.	.	M9	25
1926	MAMALA	01 JUN 74	PARA	21	613500	2353700	328	.	.	.	.	.	M9	25
1927	MAMALA	01 JUN 74	HAPL	1	613500	2353700	328	.	.	.	.	.	M9	25
1928	MAMALA	01 JUN 74	CAEC	1	613500	2353700	328	.	.	.	.	.	M9	25
1929	MAMALA	01 JUN 74	STRE	1	613500	2353700	328	.	.	.	.	.	M9	25
1930	MAMALA	01 JUN 74	POWL	4	613500	2353700	328	.	.	.	.	.	M9	25
1931	MAMALA	01 JUN 74	CERT	2	613500	2353700	328	.	.	.	.	.	M9	25
1932	MAMALA	01 JUN 74	PERP	102	613500	2353700	328	.	.	.	.	.	M9	25
1933	MAMALA	01 JUN 74	DIPL	8	613500	2353700	328	.	.	.	.	.	M9	25
1934	MAMALA	01 JUN 74	DIAL	55	613500	2353700	328	.	.	.	.	.	M9	25

1997	MAMALA	01AUG75	URBI	5	618600	2353350	152	.	.	.	.	.	1	M1	10
1998	MAMALA	01AUG75	CAEC	3	618600	2353350	152	.	.	.	.	.	1	M1	10
1999	MAMALA	01AUG75	BITZ	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2000	MAMALA	01AUG75	BITI	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2001	MAMALA	01AUG75	CERT	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2002	MAMALA	01AUG75	PERP	33	618600	2353350	152	.	.	.	.	.	1	M1	10
2003	MAMALA	01AUG75	DIPL	18	618600	2353350	152	.	.	.	.	.	1	M1	10
2004	MAMALA	01AUG75	DIAL	13	618600	2353350	152	.	.	.	.	.	1	M1	10
2005	MAMALA	01AUG75	ALAB	5	618600	2353350	152	.	.	.	.	.	1	M1	10
2006	MAMALA	01AUG75	SCAL	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2007	MAMALA	01AUG75	CERI	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2008	MAMALA	01AUG75	TRIP	23	618600	2353350	152	.	.	.	.	.	1	M1	10
2009	MAMALA	01AUG75	BALC	5	618600	2353350	152	.	.	.	.	.	1	M1	10
2010	MAMALA	01AUG75	HIPP	2	618600	2353350	152	.	.	.	.	.	1	M1	10
2011	MAMALA	01AUG75	KOGO	15	618600	2353350	152	.	.	.	.	.	1	M1	10
2012	MAMALA	01AUG75	VARI	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2013	MAMALA	01AUG75	TURR	2	618600	2353350	152	.	.	.	.	.	1	M1	10
2014	MAMALA	01AUG75	MITR	1	618600	2353350	152	.	.	.	.	.	1	M1	10
2015	MAMALA	01AUG75	ODDS	2	618600	2353350	152	1	M1	10
2016	MAMALA	01AUG75	ACTE	3	618600	2353350	152	1	M1	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2017	MAMALA	01AUG75	ATYS	2	618600	2353350	152	.	.	.	.	.	M1	10
2018	MAMALA	01AUG75	JULI	1	618600	2353350	152	.	.	.	.	.	M1	10
2019	MAMALA	01AUG75	BARB	3	618600	2353350	152	.	.	.	.	.	M1	10
2020	MAMALA	01AUG75	RDCH	1	618600	2353350	152	.	.	.	.	.	M1	10
2021	MAMALA	01AUG75	BRYA	6	618600	2353350	152	.	.	.	.	.	M1	10
2022	MAMALA	01AUG75	TELL	2	618600	2353350	152	.	.	.	.	.	M1	10
2023	MAMALA	01AUG75	HEMI	2	618600	2353350	152	.	.	.	.	.	M1	10
2024	MAMALA	01AUG75	PYRD	1	618600	2353350	152	.	.	.	.	.	M1	10
2025	MAMALA	01AUG75	LEPR	3	618600	2353350	152	.	.	.	.	.	M1	10
2026	MAMALA	01AUG75	SMAR	5	618600	2353350	152	.	.	.	.	.	M1	10
2027	MAMALA	01AUG75	TRIC	3	612220	2354150	195	.	.	.	.	.	M10	25
2028	MAMALA	01AUG75	BARL	5	612220	2354150	195	.	.	.	.	.	M10	25
2029	MAMALA	01AUG75	REPH	1	612220	2354150	195	.	.	.	.	.	M10	25
2030	MAMALA	01AUG75	RHON	5	612220	2354150	195	.	.	.	.	.	M10	25
2031	MAMALA	01AUG75	CITH	5	612220	2354150	195	.	.	.	.	.	M10	25
2032	MAMALA	01AUG75	PARA	9	612220	2354150	195	.	.	.	.	.	M10	25
2033	MAMALA	01AUG75	ORBR	1	612220	2354150	195	.	.	.	.	.	M10	25
2034	MAMALA	01AUG75	CAEC	2	612220	2354150	195	.	.	.	.	.	M10	25
2035	MAMALA	01AUG75	RISO	2	612220	2354150	195	.	.	.	.	.	M10	25
2036	MAMALA	01AUG75	PERP	53	612220	2354150	195	.	.	.	.	.	M10	25
2037	MAMALA	01AUG75	DIAL	22	612220	2354150	195	.	.	.	.	.	M10	25
2038	MAMALA	01AUG75	SCOP	73	612220	2354150	195	.	.	.	.	.	M10	25
2039	MAMALA	01AUG75	FULV	70	612220	2354150	195	.	.	.	.	.	M10	25
2040	MAMALA	01AUG75	ALAB	19	612220	2354150	195	.	.	.	.	.	M10	25
2041	MAMALA	01AUG75	TRIP	2	612220	2354150	195	.	.	.	.	.	M10	25
2042	MAMALA	01AUG75	EPIT	1	612220	2354150	195	.	.	.	.	.	M10	25
2043	MAMALA	01AUG75	BALC	23	612220	2354150	195	.	.	.	.	.	M10	25
2044	MAMALA	01AUG75	KOGO	4	612220	2354150	195	.	.	.	.	.	M10	25
2045	MAMALA	01AUG75	TURR	3	612220	2354150	195	.	.	.	.	.	M10	25
2046	MAMALA	01AUG75	MITR	5	612220	2354150	195	.	.	.	.	.	M10	25
2047	MAMALA	01AUG75	CHLA	2	612220	2354150	195	.	.	.	.	.	M10	25
2048	MAMALA	01AUG75	TELL	8	612220	2354150	195	.	.	.	.	.	M10	25
2049	MAMALA	01AUG75	LIMO	1	612220	2354150	195	.	.	.	.	.	M10	25
2050	MAMALA	01AUG75	COND	1	612220	2354150	195	.	.	.	.	.	M10	25
2051	MAMALA	01AUG75	LEPR	1	612220	2354150	195	.	.	.	.	.	M10	25
2052	MAMALA	01AUG75	FOSS	1	614500	2354300	237	.	.	.	.	.	M6	10
2053	MAMALA	01AUG75	REPH	3	614500	2354300	237	.	.	.	.	.	M6	10
2054	MAMALA	01AUG75	RHON	8	614500	2354300	237	.	.	.	.	.	M6	10
2055	MAMALA	01AUG75	CITH	26	614500	2354300	237	.	.	.	.	.	M6	10
2056	MAMALA	01AUG75	PARA	8	614500	2354300	237	.	.	.	.	.	M6	10
2057	MAMALA	01AUG75	LUPH	5	614500	2354300	237	.	.	.	.	.	M6	10
2058	MAMALA	01AUG75	ORBR	10	614500	2354300	237	.	.	.	.	.	M6	10

2059	MAMALA	01AUG75	DRBI	2	614500	2354300	237	.	.	.	.	.	1	M6	10
2060	MAMALA	01AUG75	CAEC	3	614500	2354300	237	.	.	.	.	.	1	M6	10
2061	MAMALA	01AUG75	STRE	1	614500	2354300	237	.	.	.	.	.	1	M6	10
2062	MAMALA	01AUG75	LITP	1	614500	2354300	237	.	.	.	.	.	1	M6	10
2063	MAMALA	01AUG75	PERP	106	614500	2354300	237	.	.	.	.	.	1	M6	10
2064	MAMALA	01AUG75	DIAL	70	614500	2354300	237	.	.	.	.	.	1	M6	10
2065	MAMALA	01AUG75	SCOP	190	614500	2354300	237	.	.	.	.	.	1	M6	10
2066	MAMALA	01AUG75	ALAB	1	614500	2354300	237	.	.	.	.	.	1	M6	10
2067	MAMALA	01AUG75	SCAL	54	614500	2354300	237	.	.	.	.	.	1	M6	10
2068	MAMALA	01AUG75	CERI	1	614500	2354300	237	.	.	.	.	.	1	M6	10
2069	MAMALA	01AUG75	TRIP	1	614500	2354300	237	.	.	.	.	.	1	M6	10
2070	MAMALA	01AUG75	BALC	30	614500	2354300	237	.	.	.	.	.	1	M6	10
2071	MAMALA	01AUG75	KOGU	1	614500	2354300	237	1	M6	10
2072	MAMALA	01AUG75	CARI	1	614500	2354300	237	1	M6	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2073	MAMALA	01AUG75	TURR	4	614500	2354300	237	.	.	.	.	1	M6	10
2074	MAMALA	01AUG75	TLRE	1	614500	2354300	237	.	.	.	.	1	M6	10
2075	MAMALA	01AUG75	DIND	2	614500	2354300	237	.	.	.	.	1	M6	10
2076	MAMALA	01AUG75	ACTE	6	614500	2354300	237	.	.	.	.	1	M6	10
2077	MAMALA	01AUG75	TELL	1	614500	2354300	237	.	.	.	.	1	M6	10
2078	MAMALA	01AUG75	LIMO	1	614500	2354300	237	.	.	.	.	1	M6	10
2079	MAMALA	01AUG75	BOTH	1	614500	2354300	237	.	.	.	.	1	M6	10
2080	MAMALA	01AUG75	LEPR	1	614500	2354300	237	.	.	.	.	1	M6	10
2081	MAMALA	01AUG75	EMSC	1	613300	2354650	45	.	.	.	.	1	M7	25
2082	MAMALA	01AUG75	ALCY	4	613300	2354650	45	.	.	.	.	1	M7	25
2083	MAMALA	01AUG75	FOSS	2	613300	2354650	45	.	.	.	.	1	M7	25
2084	MAMALA	01AUG75	SYNA	1	613300	2354650	45	.	.	.	.	1	M7	25
2085	MAMALA	01AUG75	TRIC	30	613300	2354650	45	.	.	.	.	1	M7	25
2086	MAMALA	01AUG75	BARL	3	613300	2354650	45	.	.	.	.	1	M7	25
2087	MAMALA	01AUG75	MERL	3	613300	2354650	45	.	.	.	.	1	M7	25
2088	MAMALA	01AUG75	RAMB	2	613300	2354650	45	.	.	.	.	1	M7	25
2089	MAMALA	01AUG75	RMIL	6	613300	2354650	45	.	.	.	.	1	M7	25
2090	MAMALA	01AUG75	REPH	8	613300	2354650	45	.	.	.	.	1	M7	25
2091	MAMALA	01AUG75	RHON	2	613300	2354650	45	.	.	.	.	1	M7	25
2092	MAMALA	01AUG75	RTRI	1	613300	2354650	45	.	.	.	.	1	M7	25
2093	MAMALA	01AUG75	CITH	93	613300	2354650	45	.	.	.	.	1	M7	25
2094	MAMALA	01AUG75	PARA	16	613300	2354650	45	.	.	.	.	1	M7	25
2095	MAMALA	01AUG75	ALVA	1	613300	2354650	45	.	.	.	.	1	M7	25
2096	MAMALA	01AUG75	LOPH	10	613300	2354650	45	.	.	.	.	1	M7	25
2097	MAMALA	01AUG75	ORBR	3	613300	2354650	45	.	.	.	.	1	M7	25
2098	MAMALA	01AUG75	DRBI	1	613300	2354650	45	.	.	.	.	1	M7	25
2099	MAMALA	01AUG75	PERP	16	613300	2354650	45	.	.	.	.	1	M7	25
2100	MAMALA	01AUG75	DIPL	4	613300	2354650	45	.	.	.	.	1	M7	25
2101	MAMALA	01AUG75	DIAL	17	613300	2354650	45	.	.	.	.	1	M7	25
2102	MAMALA	01AUG75	ALAB	1	613300	2354650	45	.	.	.	.	1	M7	25
2103	MAMALA	01AUG75	SCAL	3	613300	2354650	45	.	.	.	.	1	M7	25
2104	MAMALA	01AUG75	CERI	2	613300	2354650	45	.	.	.	.	1	M7	25
2105	MAMALA	01AUG75	TRIP	24	613300	2354650	45	.	.	.	.	1	M7	25
2106	MAMALA	01AUG75	BALC	4	613300	2354650	45	.	.	.	.	1	M7	25
2107	MAMALA	01AUG75	HIPP	5	613300	2354650	45	.	.	.	.	1	M7	25
2108	MAMALA	01AUG75	OTHE	1	613300	2354650	45	.	.	.	.	1	M7	25
2109	MAMALA	01AUG75	KOGU	2	613300	2354650	45	.	.	.	.	1	M7	25
2110	MAMALA	01AUG75	VAR1	3	613300	2354650	45	.	.	.	.	1	M7	25
2111	MAMALA	01AUG75	TURR	3	613300	2354650	45	.	.	.	.	1	M7	25
2112	MAMALA	01AUG75	MTR	2	613300	2354650	45	.	.	.	.	1	M7	25
2113	MAMALA	01AUG75	HAM1	1	613300	2354650	45	.	.	.	.	1	M7	25
2114	MAMALA	01AUG75	TERE	1	613300	2354650	45	.	.	.	.	1	M7	25
2115	MAMALA	01AUG75	MORU	3	613300	2354650	45	.	.	.	.	1	M7	25
2116	MAMALA	01AUG75	DIND	1	613300	2354650	45	.	.	.	.	1	M7	25
2117	MAMALA	01AUG75	OPAT	1	613300	2354650	45	.	.	.	.	1	M7	25
2118	MAMALA	01AUG75	UODS	4	613300	2354650	45	.	.	.	.	1	M7	25
2119	MAMALA	01AUG75	ACTE	3	613300	2354650	45	.	.	.	.	1	M7	25
2120	MAMALA	01AUG75	ATYS	5	613300	2354650	45	.	.	.	.	1	M7	25

2121	MAMALA	01AUG75	JULI	2	613300	2354650	45	.	.	.	.	.	1	M7	25
2122	MAMALA	01AUG75	WILL	2	613300	2354650	45	.	.	.	.	.	1	M7	25
2123	MAMALA	01AUG75	BARB	1	613300	2354650	45	.	.	.	.	.	1	M7	25
2124	MAMALA	01AUG75	ROCH	10	613300	2354650	45	.	.	.	.	.	1	M7	25
2125	MAMALA	01AUG75	OSTR	2	613300	2354650	45	.	.	.	.	.	1	M7	25
2126	MAMALA	01AUG75	BRVA	2	613300	2354650	45	.	.	.	.	.	1	M7	25
2127	MAMALA	01AUG75	HEMI	3	613300	2354650	45	1	M7	25
2128	MAMALA	01AUG75	BOTH	2	613300	2354650	45	1	M7	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2129	MAMALA	01AUG75	TURB	1	613300	2354650	45	.	.	.	.	.	M7	25
2130	MAMALA	01AUG75	PYRD	2	613300	2354650	45	.	.	.	.	.	M7	25
2131	MAMALA	01AUG75	LEPR	3	613300	2354650	45	.	.	.	.	.	M7	25
2132	MAMALA	01AUG75	EMSC	4	613300	2354210	198	.	.	.	.	.	M8	25
2133	MAMALA	01AUG75	ALCY	4	613300	2354210	198	.	.	.	.	.	M8	25
2134	MAMALA	01AUG75	FUSS	2	613300	2354210	198	.	.	.	.	.	M8	25
2135	MAMALA	01AUG75	LEPT	4	613300	2354210	198	.	.	.	.	.	M8	25
2136	MAMALA	01AUG75	SYNA	1	613300	2354210	198	.	.	.	.	.	M8	25
2137	MAMALA	01AUG75	TRIC	70	613300	2354210	198	.	.	.	.	.	M8	25
2138	MAMALA	01AUG75	BARL	12	613300	2354210	198	.	.	.	.	.	M8	25
2139	MAMALA	01AUG75	MERL	6	613300	2354210	198	.	.	.	.	.	M8	25
2140	MAMALA	01AUG75	RMIL	10	613300	2354210	198	.	.	.	.	.	M8	25
2141	MAMALA	01AUG75	RTRI	2	613300	2354210	198	.	.	.	.	.	M8	25
2142	MAMALA	01AUG75	RTUR	2	613300	2354210	198	.	.	.	.	.	M8	25
2143	MAMALA	01AUG75	CITH	35	613300	2354210	198	.	.	.	.	.	M8	25
2144	MAMALA	01AUG75	HAUR	1	613300	2354210	198	.	.	.	.	.	M8	25
2145	MAMALA	01AUG75	PARA	10	613300	2354210	198	.	.	.	.	.	M8	25
2146	MAMALA	01AUG75	ZEBI	1	613300	2354210	198	.	.	.	.	.	M8	25
2147	MAMALA	01AUG75	ALVA	1	613300	2354210	198	.	.	.	.	.	M8	25
2148	MAMALA	01AUG75	LUPH	6	613300	2354210	198	.	.	.	.	.	M8	25
2149	MAMALA	01AUG75	URBR	16	613300	2354210	198	.	.	.	.	.	M8	25
2150	MAMALA	01AUG75	ORBI	13	613300	2354210	198	.	.	.	.	.	M8	25
2151	MAMALA	01AUG75	CAEC	5	613300	2354210	198	.	.	.	.	.	M8	25
2152	MAMALA	01AUG75	BITH	4	613300	2354210	198	.	.	.	.	.	M8	25
2153	MAMALA	01AUG75	BITP	4	613300	2354210	198	.	.	.	.	.	M8	25
2154	MAMALA	01AUG75	BITZ	1	613300	2354210	198	.	.	.	.	.	M8	25
2155	MAMALA	01AUG75	BITI	2	613300	2354210	198	.	.	.	.	.	M8	25
2156	MAMALA	01AUG75	CERT	2	613300	2354210	198	.	.	.	.	.	M8	25
2157	MAMALA	01AUG75	PERP	8	613300	2354210	198	.	.	.	.	.	M8	25
2158	MAMALA	01AUG75	DIPL	1	613300	2354210	198	.	.	.	.	.	M8	25
2159	MAMALA	01AUG75	DIAL	3	613300	2354210	198	.	.	.	.	.	M8	25
2160	MAMALA	01AUG75	SCUP	11	613300	2354210	198	.	.	.	.	.	M8	25
2161	MAMALA	01AUG75	ALAB	2	613300	2354210	198	.	.	.	.	.	M8	25
2162	MAMALA	01AUG75	CERI	1	613300	2354210	198	.	.	.	.	.	M8	25
2163	MAMALA	01AUG75	TRIP	17	613300	2354210	198	.	.	.	.	.	M8	25
2164	MAMALA	01AUG75	BALC	8	613300	2354210	198	.	.	.	.	.	M8	25
2165	MAMALA	01AUG75	HIPP	3	613300	2354210	198	.	.	.	.	.	M8	25
2166	MAMALA	01AUG75	NATI	4	613300	2354210	198	.	.	.	.	.	M8	25
2167	MAMALA	01AUG75	OTHE	1	613300	2354210	198	.	.	.	.	.	M8	25
2168	MAMALA	01AUG75	KUGG	9	613300	2354210	198	.	.	.	.	.	M8	25
2169	MAMALA	01AUG75	TURR	3	613300	2354210	198	.	.	.	.	.	M8	25
2170	MAMALA	01AUG75	HAMI	1	613300	2354210	198	.	.	.	.	.	M8	25
2171	MAMALA	01AUG75	TERE	2	613300	2354210	198	.	.	.	.	.	M8	25
2172	MAMALA	01AUG75	MORU	1	613300	2354210	198	.	.	.	.	.	M8	25
2173	MAMALA	01AUG75	QIND	3	613300	2354210	198	.	.	.	.	.	M8	25
2174	MAMALA	01AUG75	UPAT	1	613300	2354210	198	.	.	.	.	.	M8	25
2175	MAMALA	01AUG75	ODOS	3	613300	2354210	198	.	.	.	.	.	M8	25
2176	MAMALA	01AUG75	ACTE	1	613300	2354210	198	.	.	.	.	.	M8	25
2177	MAMALA	01AUG75	JULI	4	613300	2354210	198	.	.	.	.	.	M8	25
2178	MAMALA	01AUG75	WILL	1	613300	2354210	198	.	.	.	.	.	M8	25
2179	MAMALA	01AUG75	BARB	5	613300	2354210	198	.	.	.	.	.	M8	25
2180	MAMALA	01AUG75	TELL	3	613300	2354210	198	.	.	.	.	.	M8	25
2181	MAMALA	01AUG75	LIMO	1	613300	2354210	198	.	.	.	.	.	M8	25
>182	MAMALA	01AUG75	BOTH	4	613300	2354210	198	.	.	.	.	.	M8	25

2183	MAMALA	01AUG75	PYRD	7	613300	2354210	198	1	M8	25
2184	MAMALA	01AUG75	LEPR	4	613300	2354210	198	1	M8	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECUORD	NCUORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2185	MAMALA	01AUG75	ALCY	1	613500	2353700	300	.	.	.	.	1	M9	25
2186	MAMALA	01AUG75	TRIC	3	613500	2353700	300	.	.	.	.	1	M9	25
2187	MAMALA	01AUG75	BARL	2	613500	2353700	300	.	.	.	.	1	M9	25
2188	MAMALA	01AUG75	MERL	1	613500	2353700	300	.	.	.	.	1	M9	25
2189	MAMALA	01AUG75	RMIL	3	613500	2353700	300	.	.	.	.	1	M9	25
2190	MAMALA	01AUG75	REPH	2	613500	2353700	300	.	.	.	.	1	M9	25
2191	MAMALA	01AUG75	RHDN	8	613500	2353700	300	.	.	.	.	1	M9	25
2192	MAMALA	01AUG75	CITH	1	613500	2353700	300	.	.	.	.	1	M9	25
2193	MAMALA	01AUG75	PARA	1	613500	2353700	300	.	.	.	.	1	M9	25
2194	MAMALA	01AUG75	LUPH	3	613500	2353700	300	.	.	.	.	1	M9	25
2195	MAMALA	01AUG75	UHBR	1	613500	2353700	300	.	.	.	.	1	M9	25
2196	MAMALA	01AUG75	CAEC	5	613500	2353700	300	.	.	.	.	1	M9	25
2197	MAMALA	01AUG75	CERT	1	613500	2353700	300	.	.	.	.	1	M9	25
2198	MAMALA	01AUG75	SCUP	1	613500	2353700	300	.	.	.	.	1	M9	25
2199	MAMALA	01AUG75	TRIP	4	613500	2353700	300	.	.	.	.	1	M9	25
2200	MAMALA	01AUG75	HIPP	1	613500	2353700	300	.	.	.	.	1	M9	25
2201	MAMALA	01AUG75	TURR	1	613500	2353700	300	.	.	.	.	1	M9	25
2202	MAMALA	01AUG75	OOOS	1	613500	2353700	300	.	.	.	.	1	M9	25
2203	MAMALA	01AUG75	ACTE	1	613500	2353700	300	.	.	.	.	1	M9	25
2204	MAMALA	01AUG75	ROCH	1	613500	2353700	300	.	.	.	.	1	M9	25
2205	MAMALA	01AUG75	OSTR	3	613500	2353700	300	.	.	.	.	1	M9	25
2206	MAMALA	01AUG75	HEMI	1	613500	2353700	300	.	.	.	.	1	M9	25
2207	MAMALA	01AUG75	BOTH	9	613500	2353700	300	.	.	.	.	1	M9	25
2208	MAMALA	01AUG75	ALCY	1	618600	2353350	141	.	.	.	.	1	M1	15
2209	MAMALA	01AUG75	TRIC	6	618600	2353350	141	.	.	.	.	1	M1	15
2210	MAMALA	01AUG75	CITH	8	618600	2353350	141	.	.	.	.	1	M1	15
2211	MAMALA	01AUG75	PARA	1	618600	2353350	141	.	.	.	.	1	M1	15
2212	MAMALA	01AUG75	LUPH	2	618600	2353350	141	.	.	.	.	1	M1	15
2213	MAMALA	01AUG75	ORBR	6	618600	2353350	141	.	.	.	.	1	M1	15
2214	MAMALA	01AUG75	ORB1	11	618600	2353350	141	.	.	.	.	1	M1	15
2215	MAMALA	01AUG75	CERT	2	618600	2353350	141	.	.	.	.	1	M1	15
2216	MAMALA	01AUG75	DIPL	1	618600	2353350	141	.	.	.	.	1	M1	15
2217	MAMALA	01AUG75	DIAL	1	618600	2353350	141	.	.	.	.	1	M1	15
2218	MAMALA	01AUG75	BALC	1	618600	2353350	141	.	.	.	.	1	M1	15
2219	MAMALA	01AUG75	HIPP	1	618600	2353350	141	.	.	.	.	1	M1	15
2220	MAMALA	01AUG75	TURR	2	618600	2353350	141	.	.	.	.	1	M1	15
2221	MAMALA	01AUG75	MITR	1	618600	2353350	141	.	.	.	.	1	M1	15
2222	MAMALA	01AUG75	ACTE	1	618600	2353350	141	.	.	.	.	1	M1	15
2223	MAMALA	01AUG75	ATYS	1	618600	2353350	141	.	.	.	.	1	M1	15
2224	MAMALA	01AUG75	ROCH	1	618600	2353350	141	.	.	.	.	1	M1	15
2225	MAMALA	01AUG75	PYRD	1	618600	2353350	141	.	.	.	.	1	M1	15
2226	MAMALA	01AUG75	FOSS	1	614500	2354300	195	.	.	.	.	1	M6	25
2227	MAMALA	01AUG75	RISO	1	614500	2354300	195	.	.	.	.	1	M6	25
2228	MAMALA	01AUG75	REPH	7	614500	2354300	195	.	.	.	.	1	M6	25
2229	MAMALA	01AUG75	RHDN	42	614500	2354300	195	.	.	.	.	1	M6	25
2230	MAMALA	01AUG75	PARA	3	614500	2354300	195	.	.	.	.	1	M6	25
2231	MAMALA	01AUG75	CAEC	5	614500	2354300	195	.	.	.	.	1	M6	25
2232	MAMALA	01AUG75	CERT	2	614500	2354300	195	.	.	.	.	1	M6	25
2233	MAMALA	01AUG75	PERP	106	614500	2354300	195	.	.	.	.	1	M6	25
2234	MAMALA	01AUG75	SCUP	75	614500	2354300	195	.	.	.	.	1	M6	25
2235	MAMALA	01AUG75	SCAL	110	614500	2354300	195	.	.	.	.	1	M6	25
2236	MAMALA	01AUG75	CERI	1	614500	2354300	195	.	.	.	.	1	M6	25
2237	MAMALA	01AUG75	TRIP	10	614500	2354300	195	.	.	.	.	1	M6	25
2238	MAMALA	01AUG75	BALC	15	614500	2354300	195	.	.	.	.	1	M6	25
2239	MAMALA	01AUG75	NATI	1	614500	2354300	195	1	M6	25
2240	MAMALA	01AUG75	KOGO	2	614500	2354300	195	1	M6	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2241	MAMALA	01AUG75	CARI	1	614500	2354300	195	.	.	.	.	N	M6	25
2242	MAMALA	01AUG75	TURR	5	614500	2354300	195	.	.	.	.	N	M6	25
2243	MAMALA	01AUG75	TERL	1	614500	2354300	195	.	.	.	.	N	M6	25
2244	MAMALA	01AUG75	MORU	1	614500	2354300	195	.	.	.	.	N	M6	25
2245	MAMALA	01AUG75	OPAT	1	614500	2354300	195	.	.	.	.	N	M6	25
2246	MAMALA	01AUG75	ACTE	1	614500	2354300	195	.	.	.	.	N	M6	25
2247	MAMALA	01AUG75	CHLA	1	614500	2354300	195	.	.	.	.	N	M6	25
2248	MAMALA	01AUG75	OSTR	3	614500	2354300	195	.	.	.	.	N	M6	25
2249	MAMALA	01AUG75	TELL	3	614500	2354300	195	.	.	.	.	N	M6	25
2250	MAMALA	01AUG75	LIMO	1	614500	2354300	195	.	.	.	.	N	M6	25
2251	MAMALA	01AUG75	BOTH	5	614500	2354300	195	.	.	.	.	N	M6	25
2252	MAMALA	01AUG75	CONU	2	614500	2354300	195	.	.	.	.	N	M6	25
2253	MAMALA	01AUG75	ALCY	4	613300	2354650	45	.	.	.	.	N	M7	25
2254	MAMALA	01AUG75	LEPT	4	613300	2354650	45	.	.	.	.	N	M7	25
2255	MAMALA	01AUG75	TRIC	36	613300	2354650	45	.	.	.	.	N	M7	25
2256	MAMALA	01AUG75	BARL	4	613300	2354650	45	.	.	.	.	N	M7	25
2257	MAMALA	01AUG75	MERL	3	613300	2354650	45	.	.	.	.	N	M7	25
2258	MAMALA	01AUG75	RAMB	3	613300	2354650	45	.	.	.	.	N	M7	25
2259	MAMALA	01AUG75	RMIL	6	613300	2354650	45	.	.	.	.	N	M7	25
2260	MAMALA	01AUG75	REPH	5	613300	2354650	45	.	.	.	.	N	M7	25
2261	MAMALA	01AUG75	CITH	66	613300	2354650	45	.	.	.	.	N	M7	25
2262	MAMALA	01AUG75	HAUR	1	613300	2354650	45	.	.	.	.	N	M7	25
2263	MAMALA	01AUG75	PARA	16	613300	2354650	45	.	.	.	.	N	M7	25
2264	MAMALA	01AUG75	LOPH	11	613300	2354650	45	.	.	.	.	N	M7	25
2265	MAMALA	01AUG75	ORBR	8	613300	2354650	45	.	.	.	.	N	M7	25
2266	MAMALA	01AUG75	ORBI	1	613300	2354650	45	.	.	.	.	N	M7	25
2267	MAMALA	01AUG75	CAEC	5	613300	2354650	45	.	.	.	.	N	M7	25
2268	MAMALA	01AUG75	STRE	1	613300	2354650	45	.	.	.	.	N	M7	25
2269	MAMALA	01AUG75	BITZ	5	613300	2354650	45	.	.	.	.	N	M7	25
2270	MAMALA	01AUG75	BITI	3	613300	2354650	45	.	.	.	.	N	M7	25
2271	MAMALA	01AUG75	CERT	4	613300	2354650	45	.	.	.	.	N	M7	25
2272	MAMALA	01AUG75	PERP	46	613300	2354650	45	.	.	.	.	N	M7	25
2273	MAMALA	01AUG75	DIPL	11	613300	2354650	45	.	.	.	.	N	M7	25
2274	MAMALA	01AUG75	DIAL	17	613300	2354650	45	.	.	.	.	N	M7	25
2275	MAMALA	01AUG75	ALAB	1	613300	2354650	45	.	.	.	.	N	M7	25
2276	MAMALA	01AUG75	SCAL	3	613300	2354650	45	.	.	.	.	N	M7	25
2277	MAMALA	01AUG75	CERI	3	613300	2354650	45	.	.	.	.	N	M7	25
2278	MAMALA	01AUG75	TRIP	23	613300	2354650	45	.	.	.	.	N	M7	25
2279	MAMALA	01AUG75	HELI	1	613300	2354650	45	.	.	.	.	N	M7	25
2280	MAMALA	01AUG75	EPIT	1	613300	2354650	45	.	.	.	.	N	M7	25
2281	MAMALA	01AUG75	BALC	3	613300	2354650	45	.	.	.	.	N	M7	25
2282	MAMALA	01AUG75	HIPP	5	613300	2354650	45	.	.	.	.	N	M7	25
2283	MAMALA	01AUG75	KOGD	4	613300	2354650	45	.	.	.	.	N	M7	25
2284	MAMALA	01AUG75	CARI	4	613300	2354650	45	.	.	.	.	N	M7	25
2285	MAMALA	01AUG75	TURR	2	613300	2354650	45	.	.	.	.	N	M7	25
2286	MAMALA	01AUG75	MITR	1	613300	2354650	45	.	.	.	.	N	M7	25
2287	MAMALA	01AUG75	MORU	4	613300	2354650	45	.	.	.	.	N	M7	25
2288	MAMALA	01AUG75	DIND	4	613300	2354650	45	.	.	.	.	N	M7	25
2289	MAMALA	01AUG75	OPAT	3	613300	2354650	45	.	.	.	.	N	M7	25
2290	MAMALA	01AUG75	ODDS	2	613300	2354650	45	.	.	.	.	N	M7	25
2291	MAMALA	01AUG75	ACTE	1	613300	2354650	45	.	.	.	.	N	M7	25
2292	MAMALA	01AUG75	ATYS	3	613300	2354650	45	.	.	.	.	N	M7	25
2293	MAMALA	01AUG75	WILL	1	613300	2354650	45	.	.	.	.	N	M7	25
2294	MAMALA	01AUG75	BARB	1	613300	2354650	45	.	.	.	.	N	M7	25
2295	MAMALA	01AUG75	ROCH	2	613300	2354650	45	N	M7	25
2296	MAMALA	01AUG75	BRYA	2	613300	2354650	45	N	M7	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2297	MAMALA	01AUG75	HEMI	2	613300	2354650	45	.	.	.	.	2	M7	25
2298	MAMALA	01AUG75	BOTH	2	613300	2354650	45	.	.	.	.	2	M7	25
2299	MAMALA	01AUG75	TURB	1	613300	2354650	45	.	.	.	.	2	M7	25
2300	MAMALA	01AUG75	PYRU	1	613300	2354650	45	.	.	.	.	2	M7	25

2301	MAMALA	01AUG75	LLPK	5	613300	2354050	45	.	.	.	.	.	.	.	M7	25
2302	MAMALA	01AUG75	FOSS	2	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2303	MAMALA	01AUG75	LEPT	5	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2304	MAMALA	01AUG75	TRIC	43	613300	2354210	165	.	.	.	.	.	.	.	MC	10
2305	MAMALA	01AUG75	MERL	2	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2306	MAMALA	01AUG75	RISU	3	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2307	MAMALA	01AUG75	RMIL	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2308	MAMALA	01AUG75	RTUR	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2309	MAMALA	01AUG75	CITH	23	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2310	MAMALA	01AUG75	PARA	8	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2311	MAMALA	01AUG75	LUPH	5	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2312	MAMALA	01AUG75	QHBR	24	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2313	MAMALA	01AUG75	URBI	4	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2314	MAMALA	01AUG75	BITP	4	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2315	MAMALA	01AUG75	PERP	3	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2316	MAMALA	01AUG75	DIAL	8	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2317	MAMALA	01AUG75	SCOP	7	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2318	MAMALA	01AUG75	FULV	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2319	MAMALA	01AUG75	SCAL	3	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2320	MAMALA	01AUG75	CERI	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2321	MAMALA	01AUG75	TRIP	4	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2322	MAMALA	01AUG75	EPHI	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2323	MAMALA	01AUG75	BALC	2	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2324	MAMALA	01AUG75	KUGU	2	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2325	MAMALA	01AUG75	TURR	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2326	MAMALA	01AUG75	HAMI	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2327	MAMALA	01AUG75	OIND	2	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2328	MAMALA	01AUG75	UPAT	5	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2329	MAMALA	01AUG75	ODDS	2	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2330	MAMALA	01AUG75	ACTE	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2331	MAMALA	01AUG75	BRAC	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2332	MAMALA	01AUG75	BARB	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2333	MAMALA	01AUG75	BOTH	4	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2334	MAMALA	01AUG75	LEPR	1	613300	2354210	165	.	.	.	.	.	.	.	MB	10
2335	MAMALA	01AUG75	LEMC	7	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2336	MAMALA	01AUG75	ALCY	1	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2337	MAMALA	01AUG75	FOSS	4	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2338	MAMALA	01AUG75	LEPT	17	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2339	MAMALA	01AUG75	SYNA	1	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2340	MAMALA	01AUG75	TRIC	71	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2341	MAMALA	01AUG75	BARL	6	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2342	MAMALA	01AUG75	MERL	5	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2343	MAMALA	01AUG75	RAMB	1	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2344	MAMALA	01AUG75	RMIL	9	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2345	MAMALA	01AUG75	REPH	2	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2346	MAMALA	01AUG75	RHUN	4	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2347	MAMALA	01AUG75	RTRI	1	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2348	MAMALA	01AUG75	CITH	44	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2349	MAMALA	01AUG75	PARA	9	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2350	MAMALA	01AUG75	ZEBI	1	613500	2353700	330	.	.	.	.	.	.	.	M9	25
2351	MAMALA	01AUG75	URBR	26	613500	2353700	330	M9	25
2352	MAMALA	01AUG75	ORBI	16	613500	2353700	330	M9	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCOORD	NCCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2353	MAMALA	01AUG75	CAEC	7	613500	2353700	330	.	.	.	.	.	M9	25
2354	MAMALA	01AUG75	RISU	12	613500	2353700	330	.	.	.	.	.	M9	25
2355	MAMALA	01AUG75	BRDD	2	613500	2353700	330	.	.	.	.	.	M9	25
2356	MAMALA	01AUG75	BITP	3	613500	2353700	330	.	.	.	.	.	M9	25
2357	MAMALA	01AUG75	BITI	1	613500	2353700	330	.	.	.	.	.	M9	25
2358	MAMALA	01AUG75	CERT	10	613500	2353700	330	.	.	.	.	.	M9	25
2359	MAMALA	01AUG75	PERP	10	613500	2353700	330	.	.	.	.	.	M9	25
2360	MAMALA	01AUG75	DIPL	1	613500	2353700	330	.	.	.	.	.	M9	25
2361	MAMALA	01AUG75	DIAL	2	613500	2353700	330	.	.	.	.	.	M9	25
2362	MAMALA	01AUG75	SCOP	1	613500	2353700	330	.	.	.	.	.	M9	25

2363	MAMALA	01AUG75	CERI	4	613500	2353700	330	.	.	.	.	.	M9	25
2364	MAMALA	01AUG75	TRIP	11	613500	2353700	330	.	.	.	.	.	M9	25
2365	MAMALA	01AUG75	HEL1	1	613500	2353700	330	.	.	.	.	.	M9	25
2366	MAMALA	01AUG75	BALC	5	613500	2353700	330	.	.	.	.	.	M9	25
2367	MAMALA	01AUG75	HIPP	4	613500	2353700	330	.	.	.	.	.	M9	25
2368	MAMALA	01AUG75	UTHE	1	613500	2353700	330	.	.	.	.	.	M9	25
2369	MAMALA	01AUG75	KOGD	8	613500	2353700	330	.	.	.	.	.	M9	25
2370	MAMALA	01AUG75	WITM	3	613500	2353700	330	.	.	.	.	.	M9	25
2371	MAMALA	01AUG75	TURR	3	613500	2353700	330	.	.	.	.	.	M9	25
2372	MAMALA	01AUG75	MORU	3	613500	2353700	330	.	.	.	.	.	M9	25
2373	MAMALA	01AUG75	OPAT	1	613500	2353700	330	.	.	.	.	.	M9	25
2374	MAMALA	01AUG75	ODDS	5	613500	2453700	330	.	.	.	.	.	M9	25
2375	MAMALA	01AUG75	JUL1	6	613500	2353700	330	.	.	.	.	.	M9	25
2376	MAMALA	01AUG75	USTR	15	613500	2353700	330	.	.	.	.	.	M9	25
2377	MAMALA	01AUG75	BRYA	4	613500	2353700	330	.	.	.	.	.	M9	25
2378	MAMALA	01AUG75	TELL	3	613500	2353700	330	.	.	.	.	.	M9	25
2379	MAMALA	01AUG75	HEMI	1	613500	2353700	330	.	.	.	.	.	M9	25
2380	MAMALA	01AUG75	BOTH	6	613500	2353700	330	.	.	.	.	.	M9	25
2381	MAMALA	01AUG75	COND	1	613500	2353700	330	.	.	.	.	.	M9	25
2382	MAMALA	01AUG75	PYRD	9	613500	2353700	330	.	.	.	.	.	M9	25
2383	MAMALA	01AUG75	LEPR	10	613500	2353700	330	.	.	.	.	.	M9	25
2384	MAMALA	01AUG75	EMSC	2	618600	2353350	123	.	.	.	.	.	M1	10
2385	MAMALA	01AUG75	TRIC	3	618600	2353350	123	.	.	.	.	.	M1	10
2386	MAMALA	01AUG75	REPH	1	618600	2353350	123	.	.	.	.	.	M1	10
2387	MAMALA	01AUG75	CITH	7	618600	2353350	123	.	.	.	.	.	M1	10
2388	MAMALA	01AUG75	PARA	1	618600	2353350	123	.	.	.	.	.	M1	10
2389	MAMALA	01AUG75	LOPH	1	618600	2353350	123	.	.	.	.	.	M1	10
2390	MAMALA	01AUG75	ORBR	6	618600	2353350	123	.	.	.	.	.	M1	10
2391	MAMALA	01AUG75	ORBI	20	618600	2353350	123	.	.	.	.	.	M1	10
2392	MAMALA	01AUG75	CERT	2	618600	2353350	123	.	.	.	.	.	M1	10
2393	MAMALA	01AUG75	PERP	16	618600	2353350	123	.	.	.	.	.	M1	10
2394	MAMALA	01AUG75	DIPL	3	618600	2353350	123	.	.	.	.	.	M1	10
2395	MAMALA	01AUG75	DIAL	2	618600	2353350	123	.	.	.	.	.	M1	10
2396	MAMALA	01AUG75	FULY	1	618600	2353350	123	.	.	.	.	.	M1	10
2397	MAMALA	01AUG75	ALAB	5	618600	2353350	123	.	.	.	.	.	M1	10
2398	MAMALA	01AUG75	SCAL	5	618600	2353350	123	.	.	.	.	.	M1	10
2399	MAMALA	01AUG75	CERI	1	618600	2353350	123	.	.	.	.	.	M1	10
2400	MAMALA	01AUG75	BALC	1	618600	2353350	123	.	.	.	.	.	M1	10
2401	MAMALA	01AUG75	HIPP	1	618600	2353350	123	.	.	.	.	.	M1	10
2402	MAMALA	01AUG75	OTHE	1	618600	2353350	123	.	.	.	.	.	M1	10
2403	MAMALA	01AUG75	KOGD	3	618600	2353350	123	.	.	.	.	.	M1	10
2404	MAMALA	01AUG75	TURR	1	618600	2353350	123	.	.	.	.	.	M1	10
2405	MAMALA	01AUG75	QIND	1	618600	2353350	123	.	.	.	.	.	M1	10
2406	MAMALA	01AUG75	ODDS	1	618600	2353350	123	.	.	.	.	.	M1	10
2407	MAMALA	01AUG75	ACTE	2	618600	2353350	123	M1	10
2408	MAMALA	01AUG75	ATYS	1	618600	2353350	123	M1	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2409	MAMALA	01AUG75	WILL	1	618600	2353350	123	.	.	.	.	.	M1	10
2410	MAMALA	01AUG75	CHLA	3	618600	2353350	123	.	.	.	.	.	M1	10
2411	MAMALA	01AUG75	OSTR	1	618600	2353350	123	.	.	.	.	.	M1	10
2412	MAMALA	01AUG75	BRYA	4	618600	2353350	123	.	.	.	.	.	M1	10
2413	MAMALA	01AUG75	LIMO	2	618600	2353350	123	.	.	.	.	.	M1	10
2414	MAMALA	01AUG75	BOTH	5	618600	2353350	123	.	.	.	.	.	M1	10
2415	MAMALA	01AUG75	PYRD	1	618600	2353350	123	.	.	.	.	.	M1	10
2416	MAMALA	01AUG75	LEPT	1	613300	2354650	42	.	.	.	.	.	M7	10
2417	MAMALA	01AUG75	TRIC	16	613300	2354650	42	.	.	.	.	.	M7	10
2418	MAMALA	01AUG75	RISD	2	613300	2354650	42	.	.	.	.	.	M7	10
2419	MAMALA	01AUG75	REPH	5	613300	2354650	42	.	.	.	.	.	M7	10
2420	MAMALA	01AUG75	CITH	49	613300	2354650	42	.	.	.	.	.	M7	10
2421	MAMALA	01AUG75	PARA	8	613300	2354650	42	.	.	.	.	.	M7	10
2422	MAMALA	01AUG75	ALVA	2	613300	2354650	42	.	.	.	.	.	M7	10
2423	MAMALA	01AUG75	LOPH	16	613300	2354650	42	.	.	.	.	.	M7	10
2424	MAMALA	01AUG75	ORRR	1	613300	2354650	42	.	.	.	.	.	M7	10

2425	MAMALA	01AUG75	URB1	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2426	MAMALA	01AUG75	CAEC	7	613300	2354650	42	.	.	.	.	.	.	M7	10
2427	MAMALA	01AUG75	STRE	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2428	MAMALA	01AUG75	CERT	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2429	MAMALA	01AUG75	PERP	33	613300	2354650	42	.	.	.	.	.	.	M7	10
2430	MAMALA	01AUG75	DIPL	4	613300	2354650	42	.	.	.	.	.	.	M7	10
2431	MAMALA	01AUG75	DIAL	3	613300	2354650	42	.	.	.	.	.	.	M7	10
2432	MAMALA	01AUG75	SCAL	8	613300	2354650	42	.	.	.	.	.	.	M7	10
2433	MAMALA	01AUG75	CERI	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2434	MAMALA	01AUG75	TRIP	10	613300	2354650	42	.	.	.	.	.	.	M7	10
2435	MAMALA	01AUG75	BALC	2	613300	2354650	42	.	.	.	.	.	.	M7	10
2436	MAMALA	01AUG75	HIPP	7	613300	2354650	42	.	.	.	.	.	.	M7	10
2437	MAMALA	01AUG75	KOGD	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2438	MAMALA	01AUG75	TURK	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2439	MAMALA	01AUG75	ODDS	3	613300	2354650	42	.	.	.	.	.	.	M7	10
2440	MAMALA	01AUG75	HARB	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2441	MAMALA	01AUG75	CHLA	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2442	MAMALA	01AUG75	BRYA	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2443	MAMALA	01AUG75	BOTH	3	613300	2354650	42	.	.	.	.	.	.	M7	10
2444	MAMALA	01AUG75	PYRD	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2445	MAMALA	01AUG75	LEPR	1	613300	2354650	42	.	.	.	.	.	.	M7	10
2446	MAMALA	01AUG75	TRIC	7	618600	2353350	108	.	.	.	.	.	.	M1	10
2447	MAMALA	01AUG75	CITH	8	618600	2353350	108	.	.	.	.	.	.	M1	10
2448	MAMALA	01AUG75	PARA	3	618600	2353350	108	.	.	.	.	.	.	M1	10
2449	MAMALA	01AUG75	ORBR	6	618600	2353350	108	.	.	.	.	.	.	M1	10
2450	MAMALA	01AUG75	URB1	3	618600	2353350	108	.	.	.	.	.	.	M1	10
2451	MAMALA	01AUG75	CAEC	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2452	MAMALA	01AUG75	PERP	4	618600	2353350	108	.	.	.	.	.	.	M1	10
2453	MAMALA	01AUG75	DIPL	5	618600	2353350	108	.	.	.	.	.	.	M1	10
2454	MAMALA	01AUG75	DIAL	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2455	MAMALA	01AUG75	SCAL	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2456	MAMALA	01AUG75	TRIP	2	618600	2353350	108	.	.	.	.	.	.	M1	10
2457	MAMALA	01AUG75	HAMI	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2458	MAMALA	01AUG75	OPAT	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2459	MAMALA	01AUG75	ODDS	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2460	MAMALA	01AUG75	ACTE	1	618600	2353350	108	.	.	.	.	.	.	M1	10
2461	MAMALA	01AUG75	TELL	5	618600	2353350	108	.	.	.	.	.	.	M1	10
2462	MAMALA	01AUG75	EMSC	1	613300	2354650	36	.	.	.	.	.	.	M7	25
2463	MAMALA	01AUG75	ALCY	6	613300	2354650	36	M7	25
2464	MAMALA	01AUG75	FUSS	1	613300	2354650	36	M7	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCORD	NCCORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2465	MAMALA	01AUG75	LEPT	6	613300	2354650	36	.	.	.	.	4	M7	25
2466	MAMALA	01AUG75	SYNA	1	613300	2354650	36	.	.	.	.	4	M7	25
2467	MAMALA	01AUG75	TRIC	146	613300	2354650	36	.	.	.	.	4	M7	25
2468	MAMALA	01AUG75	BARL	4	613300	2354650	36	.	.	.	.	4	M7	25
2469	MAMALA	01AUG75	MERL	3	613300	2354650	36	.	.	.	.	4	M7	25
2470	MAMALA	01AUG75	RAMB	4	613300	2354650	36	.	.	.	.	4	M7	25
2471	MAMALA	01AUG75	RMIL	6	613300	2354650	36	.	.	.	.	4	M7	25
2472	MAMALA	01AUG75	REPH	2	613300	2354650	36	.	.	.	.	4	M7	25
2473	MAMALA	01AUG75	RTUR	2	613300	2354650	36	.	.	.	.	4	M7	25
2474	MAMALA	01AUG75	CITH	224	613300	2354650	36	.	.	.	.	4	M7	25
2475	MAMALA	01AUG75	PARA	46	613300	2354650	36	.	.	.	.	4	M7	25
2476	MAMALA	01AUG75	LUPH	41	613300	2354650	36	.	.	.	.	4	M7	25
2477	MAMALA	01AUG75	ORBR	23	613300	2354650	36	.	.	.	.	4	M7	25
2478	MAMALA	01AUG75	URB1	13	613300	2354650	36	.	.	.	.	4	M7	25
2479	MAMALA	01AUG75	CAEC	13	613300	2354650	36	.	.	.	.	4	M7	25
2480	MAMALA	01AUG75	STRE	3	613300	2354650	36	.	.	.	.	4	M7	25
2481	MAMALA	01AUG75	BITP	1	613300	2354650	36	.	.	.	.	4	M7	25
2482	MAMALA	01AUG75	BITZ	1	613300	2354650	36	.	.	.	.	4	M7	25
2483	MAMALA	01AUG75	BITI	2	613300	2354650	36	.	.	.	.	4	M7	25
2484	MAMALA	01AUG75	CERT	3	613300	2354650	36	.	.	.	.	4	M7	25
2485	MAMALA	01AUG75	PERP	106	613300	2354650	36	.	.	.	.	4	M7	25
2486	MAMALA	01AUG75	DIPL	32	613300	2354650	36	.	.	.	.	4	M7	25

2549	MAMALA	01 JUL 77	WILL	2	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2550	MAMALA	01 JUL 77	BARG	1	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2551	MAMALA	01 JUL 77	CHLA	4	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2552	MAMALA	01 JUL 77	TELL	17	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2553	MAMALA	01 JUL 77	BOTH	7	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2554	MAMALA	01 JUL 77	TURB	1	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2555	MAMALA	01 JUL 77	PYRD	4	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2556	MAMALA	01 JUL 77	PUPA	4	618600	2353350	243	90	280	8.1	.	.	1	M1	25
2557	MAMALA	01 JUL 77	RISO	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2558	MAMALA	01 JUL 77	CITH	4	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2559	MAMALA	01 JUL 77	CAEC	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2560	MAMALA	01 JUL 77	PERP	11	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2561	MAMALA	01 JUL 77	SCOP	149	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2562	MAMALA	01 JUL 77	FULV	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2563	MAMALA	01 JUL 77	SCAL	8	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2564	MAMALA	01 JUL 77	BALC	19	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2565	MAMALA	01 JUL 77	NATI	2	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2566	MAMALA	01 JUL 77	TURR	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2567	MAMALA	01 JUL 77	ACTE	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2568	MAMALA	01 JUL 77	TELL	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2569	MAMALA	01 JUL 77	BOTH	1	612220	2354150	291	480	240	12.3	.	.	1	M10	25
2570	MAMALA	01 JUL 77	RISO	9	612100	2354650	194	430	330	31.4	.	.	1	M13	25
2571	MAMALA	01 JUL 77	PARA	3	612100	2354650	194	430	330	31.4	.	.	1	M13	25
2572	MAMALA	01 JUL 77	BROO	1	612100	2354650	194	430	330	31.4	.	.	1	M13	25
2573	MAMALA	01 JUL 77	POWL	2	612100	2354650	194	430	330	31.4	.	.	1	M13	25
2574	MAMALA	01 JUL 77	CERT	1	612100	2354650	194	430	330	31.4	.	.	1	M13	25
2575	MAMALA	01 JUL 77	PERP	24	612100	2354650	194	430	330	31.4	.	.	1	M13	25
2576	MAMALA	01 JUL 77	DIPL	2	612100	2354650	194	430	330	31.4	.	.	1	M13	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECUORD	NCUORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2577	MAMALA	01 JUL 77	DIAL	14	612100	2354650	194	430	330	31.4	.	1	M13	25
2578	MAMALA	01 JUL 77	SCOP	96	612100	2354650	194	430	330	31.4	.	1	M13	25
2579	MAMALA	01 JUL 77	FULV	93	612100	2354650	194	430	330	31.4	.	1	M13	25
2580	MAMALA	01 JUL 77	SCAL	11	612100	2354650	194	430	330	31.4	.	1	M13	25
2581	MAMALA	01 JUL 77	HELL	2	612100	2354650	194	430	330	31.4	.	1	M13	25
2582	MAMALA	01 JUL 77	EPIT	3	612100	2354650	194	430	330	31.4	.	1	M13	25
2583	MAMALA	01 JUL 77	BALC	65	612100	2354650	194	430	330	31.4	.	1	M13	25
2584	MAMALA	01 JUL 77	NATI	5	612100	2354650	194	430	330	31.4	.	1	M13	25
2585	MAMALA	01 JUL 77	KOGO	2	612100	2354650	194	430	330	31.4	.	1	M13	25
2586	MAMALA	01 JUL 77	TURR	2	612100	2354650	194	430	330	31.4	.	1	M13	25
2587	MAMALA	01 JUL 77	TELL	23	612100	2354650	194	430	330	31.4	.	1	M13	25
2588	MAMALA	01 JUL 77	LIMD	1	612100	2354650	194	430	330	31.4	.	1	M13	25
2589	MAMALA	01 JUL 77	BOTH	3	612100	2354650	194	430	330	31.4	.	1	M13	25
2590	MAMALA	01 JUL 77	EMSC	1	616370	2354400	123	.	.	.	.	1	M16	10
2591	MAMALA	01 JUL 77	ALCY	1	616370	2354400	123	.	.	.	.	1	M16	10
2592	MAMALA	01 JUL 77	FOSS	1	616370	2354400	123	.	.	.	.	1	M16	10
2593	MAMALA	01 JUL 77	TRIC	39	616370	2354400	123	.	.	.	.	1	M16	10
2594	MAMALA	01 JUL 77	BARL	3	616370	2354400	123	.	.	.	.	1	M16	10
2595	MAMALA	01 JUL 77	MERL	1	616370	2354400	123	.	.	.	.	1	M16	10
2596	MAMALA	01 JUL 77	RMIL	1	616370	2354400	123	.	.	.	.	1	M16	10
2597	MAMALA	01 JUL 77	REPH	1	616370	2354400	123	.	.	.	.	1	M16	10
2598	MAMALA	01 JUL 77	CITH	15	616370	2354400	123	.	.	.	.	1	M16	10
2599	MAMALA	01 JUL 77	HAUR	1	616370	2354400	123	.	.	.	.	1	M16	10
2600	MAMALA	01 JUL 77	PARA	5	616370	2354400	123	.	.	.	.	1	M16	10
2601	MAMALA	01 JUL 77	LOPH	8	616370	2354400	123	.	.	.	.	1	M16	10
2602	MAMALA	01 JUL 77	ORBR	11	616370	2354400	123	.	.	.	.	1	M16	10
2603	MAMALA	01 JUL 77	ORBI	3	616370	2354400	123	.	.	.	.	1	M16	10
2604	MAMALA	01 JUL 77	CAEC	3	616370	2354400	123	.	.	.	.	1	M16	10
2605	MAMALA	01 JUL 77	BITZ	1	616370	2354400	123	.	.	.	.	1	M16	10
2606	MAMALA	01 JUL 77	CERT	1	616370	2354400	123	.	.	.	.	1	M16	10
2607	MAMALA	01 JUL 77	PERP	12	616370	2354400	123	.	.	.	.	1	M16	10
2608	MAMALA	01 JUL 77	SCOP	3	616370	2354400	123	.	.	.	.	1	M16	10
2609	MAMALA	01 JUL 77	ALAB	1	616370	2354400	123	.	.	.	.	1	M16	10
2610	MAMALA	01 JUL 77	SCAL	1	616370	2354400	123	.	.	.	.	1	M16	10

2611	MAMALA	01JUL77	CERI	3	616370	2354400	123	.	.	.	.	.	1	M16	10
2612	MAMALA	01JUL77	TRIP	2	616370	2354400	123	.	.	.	.	.	1	M16	10
2613	MAMALA	01JUL77	EPIT	1	616370	2354400	123	.	.	.	.	.	1	M16	10
2614	MAMALA	01JUL77	BALC	4	616370	2354400	123	.	.	.	.	.	1	M16	10
2615	MAMALA	01JUL77	HIPP	3	616370	2354400	123	.	.	.	.	.	1	M16	10
2616	MAMALA	01JUL77	NATI	1	616370	2354400	123	.	.	.	.	.	1	M16	10
2617	MAMALA	01JUL77	OTHE	2	616370	2354400	123	.	.	.	.	.	1	M16	10
2618	MAMALA	01JUL77	KUGO	1	616370	2354400	123	.	.	.	.	.	1	M16	10
2619	MAMALA	01JUL77	BRAC	2	616370	2354400	123	.	.	.	.	.	1	M16	10
2620	MAMALA	01JUL77	BARB	2	616370	2354400	123	.	.	.	.	.	1	M16	10
2621	MAMALA	01JUL77	TELL	1	616370	2354400	123	.	.	.	.	.	1	M16	10
2622	MAMALA	01JUL77	HEMI	2	616370	2354400	123	.	.	.	.	.	1	M16	10
2623	MAMALA	01JUL77	LEPH	2	616370	2354400	123	.	.	.	.	.	1	M16	10
2624	MAMALA	01JUL77	REPH	2	616210	2353950	270	.	.	.	.	.	1	M17	10
2625	MAMALA	01JUL77	RHON	2	616210	2353950	270	.	.	.	.	.	1	M17	10
2626	MAMALA	01JUL77	CITH	2	616210	2353950	270	.	.	.	.	.	1	M17	10
2627	MAMALA	01JUL77	ALVA	1	616210	2353950	270	.	.	.	.	.	1	M17	10
2628	MAMALA	01JUL77	LOPH	1	616210	2353950	270	.	.	.	.	.	1	M17	10
2629	MAMALA	01JUL77	ORBR	6	616210	2353950	270	.	.	.	.	.	1	M17	10
2630	MAMALA	01JUL77	ORBI	1	616210	2353950	270	.	.	.	.	.	1	M17	10
2631	MAMALA	01JUL77	CERT	1	616210	2353950	270	1	M17	10
2632	MAMALA	01JUL77	PERP	6	616210	2353950	270	1	M17	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECUORD	NCUORD	DEPTH	OXDEMAND	TRN	TOTALP	TOTALSU	REPL	STATION	VOL
2633	MAMALA	01JUL77	DIAL	6	616210	2353950	270	.	.	.	.	1	M17	10
2634	MAMALA	01JUL77	SCOP	19	616210	2353950	270	.	.	.	.	1	M17	10
2635	MAMALA	01JUL77	SCAL	2	616210	2353950	270	.	.	.	.	1	M17	10
2636	MAMALA	01JUL77	TRIP	3	616210	2353950	270	.	.	.	.	1	M17	10
2637	MAMALA	01JUL77	BALC	1	616210	2353950	270	.	.	.	.	1	M17	10
2638	MAMALA	01JUL77	HIPP	2	616210	2353950	270	.	.	.	.	1	M17	10
2639	MAMALA	01JUL77	OTHE	1	616210	2353950	270	.	.	.	.	1	M17	10
2640	MAMALA	01JUL77	BARB	1	616210	2353950	270	.	.	.	.	1	M17	10
2641	MAMALA	01JUL77	OSTR	1	616210	2353950	270	.	.	.	.	1	M17	10
2642	MAMALA	01JUL77	BOTH	2	616210	2353950	270	.	.	.	.	1	M17	10
2643	MAMALA	01JUL77	FOSS	2	618220	2353750	108	.	.	.	.	1	M18	25
2644	MAMALA	01JUL77	TRIC	51	618220	2353750	108	.	.	.	.	1	M18	25
2645	MAMALA	01JUL77	RISO	1	618220	2353750	108	.	.	.	.	1	M18	25
2646	MAMALA	01JUL77	RAMB	1	618220	2353750	108	.	.	.	.	1	M18	25
2647	MAMALA	01JUL77	REPH	1	618220	2353750	108	.	.	.	.	1	M18	25
2648	MAMALA	01JUL77	CITH	188	618220	2353750	108	.	.	.	.	1	M18	25
2649	MAMALA	01JUL77	HAUR	9	618220	2353750	108	.	.	.	.	1	M18	25
2650	MAMALA	01JUL77	PARA	85	618220	2353750	108	.	.	.	.	1	M18	25
2651	MAMALA	01JUL77	ALVA	1	618220	2353750	108	.	.	.	.	1	M18	25
2652	MAMALA	01JUL77	LOPH	31	618220	2353750	108	.	.	.	.	1	M18	25
2653	MAMALA	01JUL77	ORBR	24	618220	2353750	108	.	.	.	.	1	M18	25
2654	MAMALA	01JUL77	CAEC	9	618220	2353750	108	.	.	.	.	1	M18	25
2655	MAMALA	01JUL77	BRDD	2	618220	2353750	108	.	.	.	.	1	M18	25
2656	MAMALA	01JUL77	CERT	2	618220	2353750	108	.	.	.	.	1	M18	25
2657	MAMALA	01JUL77	PERP	334	618220	2353750	108	.	.	.	.	1	M18	25
2658	MAMALA	01JUL77	DIPL	15	618220	2353750	108	.	.	.	.	1	M18	25
2659	MAMALA	01JUL77	DIAL	205	618220	2353750	108	.	.	.	.	1	M18	25
2660	MAMALA	01JUL77	SCOP	19	618220	2353750	108	.	.	.	.	1	M18	25
2661	MAMALA	01JUL77	FULV	2	618220	2353750	108	.	.	.	.	1	M18	25
2662	MAMALA	01JUL77	SCAL	194	618220	2353750	108	.	.	.	.	1	M18	25
2663	MAMALA	01JUL77	CERI	1	618220	2353750	108	.	.	.	.	1	M18	25
2664	MAMALA	01JUL77	TRIP	8	618220	2353750	108	.	.	.	.	1	M18	25
2665	MAMALA	01JUL77	BALC	9	618220	2353750	108	.	.	.	.	1	M18	25
2666	MAMALA	01JUL77	OTHE	2	618220	2353750	108	.	.	.	.	1	M18	25
2667	MAMALA	01JUL77	KUGO	4	618220	2353750	108	.	.	.	.	1	M18	25
2668	MAMALA	01JUL77	VARI	1	618220	2353750	108	.	.	.	.	1	M18	25
2669	MAMALA	01JUL77	MITR	1	618220	2353750	108	.	.	.	.	1	M18	25
2670	MAMALA	01JUL77	MORU	1	618220	2353750	108	.	.	.	.	1	M18	25
2671	MAMALA	01JUL77	RUCH	2	618220	2353750	108	.	.	.	.	1	M18	25
2672	MAMALA	01JUL77	TELL	1	618220	2353750	108	.	.	.	.	1	M18	25

2673	MAMALA	01JUL77	BOTH	1	614500	2354300	114	290	260	14.8	1	M6	25
2674	MAMALA	01JUL77	LMSC	1	614500	2354300	114	290	260	14.8	1	M6	10
2675	MAMALA	01JUL77	FUSS	1	614500	2354300	114	290	260	14.8	1	M6	10
2676	MAMALA	01JUL77	TRIC	27	614500	2354300	114	290	260	14.8	1	M6	10
2677	MAMALA	01JUL77	MERL	1	614500	2354300	114	290	260	14.8	1	M6	10
2678	MAMALA	01JUL77	RISO	5	614500	2354300	114	290	260	14.8	1	M6	10
2679	MAMALA	01JUL77	KEPH	4	614500	2354300	114	290	260	14.8	1	M6	10
2680	MAMALA	01JUL77	CITH	33	614500	2354300	114	290	260	14.8	1	M6	10
2681	MAMALA	01JUL77	PARA	17	614500	2354300	114	290	260	14.8	1	M6	10
2682	MAMALA	01JUL77	LOPH	9	614500	2354300	114	290	260	14.8	1	M6	10
2683	MAMALA	01JUL77	URBR	15	614500	2354300	114	290	260	14.8	1	M6	10
2684	MAMALA	01JUL77	URB1	1	614500	2354300	114	290	260	14.8	1	M6	10
2685	MAMALA	01JUL77	CAEC	4	614500	2354300	114	290	260	14.8	1	M6	10
2686	MAMALA	01JUL77	PERP	30	614500	2354300	114	290	260	14.8	1	M6	10
2687	MAMALA	01JUL77	DIPL	2	614500	2354300	114	290	260	14.8	1	M6	10
2688	MAMALA	01JUL77	DIAL	5	614500	2354300	114	290	260	14.8	1	M6	10

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OBS	LOCATION	DATE	SPECIES	ABUND	COORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2689	MAMALA	01JUL77	FULV	8	614500	2354300	114	290	260	14.8	1	M6	10	
2690	MAMALA	01JUL77	ALAB	1	614500	2354300	114	290	260	14.8	1	M6	10	
2691	MAMALA	01JUL77	SCAL	7	614500	2354300	114	290	260	14.8	1	M6	10	
2692	MAMALA	01JUL77	CERI	1	614500	2354300	114	290	260	14.8	1	M6	10	
2693	MAMALA	01JUL77	TRIP	2	614500	2354300	114	290	260	14.8	1	M6	10	
2694	MAMALA	01JUL77	BALC	1	614500	2354300	114	290	260	14.8	1	M6	10	
2695	MAMALA	01JUL77	NATI	1	614500	2354300	114	290	260	14.8	1	M6	10	
2696	MAMALA	01JUL77	OTHE	4	614500	2354300	114	290	260	14.8	1	M6	10	
2697	MAMALA	01JUL77	KOGO	1	614500	2354300	114	290	260	14.8	1	M6	10	
2698	MAMALA	01JUL77	TURR	1	614500	2354300	114	290	260	14.8	1	M6	10	
2699	MAMALA	01JUL77	HAMI	2	614500	2354300	114	290	260	14.8	1	M6	10	
2700	MAMALA	01JUL77	TERE	1	614500	2354300	114	290	260	14.8	1	M6	10	
2701	MAMALA	01JUL77	BARB	2	614500	2354300	114	290	260	14.8	1	M6	10	
2702	MAMALA	01JUL77	ROCH	1	614500	2354300	114	290	260	14.8	1	M6	10	
2703	MAMALA	01JUL77	DSTR	3	614500	2354300	114	290	260	14.8	1	M6	10	
2704	MAMALA	01JUL77	TELL	7	614500	2354300	114	290	260	14.8	1	M6	10	
2705	MAMALA	01JUL77	TURB	1	614500	2354300	114	290	260	14.8	1	M6	10	
2706	MAMALA	01JUL77	LEPH	3	614500	2354300	114	290	260	14.8	1	M6	10	
2707	MAMALA	01JUL77	RISO	1	613300	2354650	123	930	190	27.1	1	M7	25	
2708	MAMALA	01JUL77	KEPH	1	613300	2354650	123	930	190	27.1	1	M7	25	
2709	MAMALA	01JUL77	CITH	13	613300	2354650	123	930	190	27.1	1	M7	25	
2710	MAMALA	01JUL77	PARA	10	613300	2354650	123	930	190	27.1	1	M7	25	
2711	MAMALA	01JUL77	LOPH	4	613300	2354650	123	930	190	27.1	1	M7	25	
2712	MAMALA	01JUL77	URBR	3	613300	2354650	123	930	190	27.1	1	M7	25	
2713	MAMALA	01JUL77	CAEC	2	613300	2354650	123	930	190	27.1	1	M7	25	
2714	MAMALA	01JUL77	PERP	26	613300	2354650	123	930	190	27.1	1	M7	25	
2715	MAMALA	01JUL77	DIPL	1	613300	2354650	123	930	190	27.1	1	M7	25	
2716	MAMALA	01JUL77	DIAL	24	613300	2354650	123	930	190	27.1	1	M7	25	
2717	MAMALA	01JUL77	SCDP	6	613300	2354650	123	930	190	27.1	1	M7	25	
2718	MAMALA	01JUL77	FULV	43	613300	2354650	123	930	190	27.1	1	M7	25	
2719	MAMALA	01JUL77	SCAL	5	613300	2354650	123	930	190	27.1	1	M7	25	
2720	MAMALA	01JUL77	CERI	1	613300	2354650	123	930	190	27.1	1	M7	25	
2721	MAMALA	01JUL77	TRIP	1	613300	2354650	123	930	190	27.1	1	M7	25	
2722	MAMALA	01JUL77	EPIT	1	613300	2354650	123	930	190	27.1	1	M7	25	
2723	MAMALA	01JUL77	BALC	19	613300	2354650	123	930	190	27.1	1	M7	25	
2724	MAMALA	01JUL77	NATI	11	613300	2354650	123	930	190	27.1	1	M7	25	
2725	MAMALA	01JUL77	KOGO	2	613300	2354650	123	930	190	27.1	1	M7	25	
2726	MAMALA	01JUL77	TURR	1	613300	2354650	123	930	190	27.1	1	M7	25	
2727	MAMALA	01JUL77	OIND	4	613300	2354650	123	930	190	27.1	1	M7	25	
2728	MAMALA	01JUL77	ACTE	10	613300	2354650	123	930	190	27.1	1	M7	25	
2729	MAMALA	01JUL77	WILL	1	613300	2354650	123	930	190	27.1	1	M7	25	
2730	MAMALA	01JUL77	CHLA	3	613300	2354650	123	930	190	27.1	1	M7	25	
2731	MAMALA	01JUL77	ROCH	4	613300	2354650	123	930	190	27.1	1	M7	25	
2732	MAMALA	01JUL77	TELL	25	613300	2354650	123	930	190	27.1	1	M7	25	
2733	MAMALA	01JUL77	PUPA	5	613300	2354650	123	930	190	27.1	1	M7	25	
2734	MAMALA	01JUL77	TRIC	3	612300	2354210	267	290	140	8.7	1	M8	25	

2735	MAMALA	01JUL77	RISO	9	613300	2354210	267	290	140	8.7	.	1	MB	25
2736	MAMALA	01JUL77	RMIL	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2737	MAMALA	01JUL77	REPH	5	613300	2354210	267	290	140	8.7	.	1	MB	25
2738	MAMALA	01JUL77	RHUN	3	613300	2354210	267	290	140	8.7	.	1	MB	25
2739	MAMALA	01JUL77	CITH	23	613300	2354210	267	290	140	8.7	.	1	MB	25
2740	MAMALA	01JUL77	PARA	28	613300	2354210	267	290	140	8.7	.	1	MB	25
2741	MAMALA	01JUL77	ALVA	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2742	MAMALA	01JUL77	LUPH	12	613300	2354210	267	290	140	8.7	.	1	MB	25
2743	MAMALA	01JUL77	DRBR	10	613300	2354210	267	290	140	8.7	.	1	MB	25
2744	MAMALA	01JUL77	CAEC	9	613300	2354210	267	290	140	8.7	.	1	MB	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2745	MAMALA	01JUL77	STRE	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2746	MAMALA	01JUL77	CERT	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2747	MAMALA	01JUL77	PERP	168	613300	2354210	267	290	140	8.7	.	1	MB	25
2748	MAMALA	01JUL77	DIPL	5	613300	2354210	267	290	140	8.7	.	1	MB	25
2749	MAMALA	01JUL77	DIAL	80	613300	2354210	267	290	140	8.7	.	1	MB	25
2750	MAMALA	01JUL77	SCOP	215	613300	2354210	267	290	140	8.7	.	1	MB	25
2751	MAMALA	01JUL77	FULV	2	613300	2354210	267	290	140	8.7	.	1	MB	25
2752	MAMALA	01JUL77	SCAL	122	613300	2354210	267	290	140	8.7	.	1	MB	25
2753	MAMALA	01JUL77	TRIP	6	613300	2354210	267	290	140	8.7	.	1	MB	25
2754	MAMALA	01JUL77	HELL	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2755	MAMALA	01JUL77	EPIT	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2756	MAMALA	01JUL77	BALC	27	613300	2354210	267	290	140	8.7	.	1	MB	25
2757	MAMALA	01JUL77	HIPP	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2758	MAMALA	01JUL77	SMIT	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2759	MAMALA	01JUL77	MITR	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2760	MAMALA	01JUL77	UIND	6	613300	2354210	267	290	140	8.7	.	1	MB	25
2761	MAMALA	01JUL77	ACTE	2	613300	2354210	267	290	140	8.7	.	1	MB	25
2762	MAMALA	01JUL77	ATYS	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2763	MAMALA	01JUL77	WILL	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2764	MAMALA	01JUL77	BARB	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2765	MAMALA	01JUL77	CHLA	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2766	MAMALA	01JUL77	ROCH	4	613300	2354210	267	290	140	8.7	.	1	MB	25
2767	MAMALA	01JUL77	DSTR	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2768	MAMALA	01JUL77	TELL	3	613300	2354210	267	290	140	8.7	.	1	MB	25
2769	MAMALA	01JUL77	HEMI	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2770	MAMALA	01JUL77	LIMO	3	613300	2354210	267	290	140	8.7	.	1	MB	25
2771	MAMALA	01JUL77	BOTH	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2772	MAMALA	01JUL77	COND	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2773	MAMALA	01JUL77	PYRD	1	613300	2354210	267	290	140	8.7	.	1	MB	25
2774	MAMALA	01JUL77	FOSS	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2775	MAMALA	01JUL77	TRIC	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2776	MAMALA	01JUL77	MERL	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2777	MAMALA	01JUL77	RISO	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2778	MAMALA	01JUL77	REPH	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2779	MAMALA	01JUL77	RHON	8	613500	2353700	315	300	290	5.5	.	1	M9	25
2780	MAMALA	01JUL77	CITH	27	613500	2353700	315	300	290	5.5	.	1	M9	25
2781	MAMALA	01JUL77	PARA	28	613500	2353700	315	300	290	5.5	.	1	M9	25
2782	MAMALA	01JUL77	LDPH	14	613500	2353700	315	300	290	5.5	.	1	M9	25
2783	MAMALA	01JUL77	DRBR	8	613500	2353700	315	300	290	5.5	.	1	M9	25
2784	MAMALA	01JUL77	CAEC	10	613500	2353700	315	300	290	5.5	.	1	M9	25
2785	MAMALA	01JUL77	POWL	37	613500	2353700	315	300	290	5.5	.	1	M9	25
2786	MAMALA	01JUL77	PERP	126	613500	2353700	315	300	290	5.5	.	1	M9	25
2787	MAMALA	01JUL77	DIPL	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2788	MAMALA	01JUL77	DIAL	33	613500	2353700	315	300	290	5.5	.	1	M9	25
2789	MAMALA	01JUL77	SCOP	169	613500	2353700	315	300	290	5.5	.	1	M9	25
2790	MAMALA	01JUL77	SCAL	115	613500	2353700	315	300	290	5.5	.	1	M9	25
2791	MAMALA	01JUL77	CERI	4	613500	2353700	315	300	290	5.5	.	1	M9	25
2792	MAMALA	01JUL77	TRIP	12	613500	2353700	315	300	290	5.5	.	1	M9	25
2793	MAMALA	01JUL77	EPIT	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2794	MAMALA	01JUL77	BALC	42	613500	2353700	315	300	290	5.5	.	1	M9	25
2795	MAMALA	01JUL77	OTHE	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2796	MAMALA	01JUL77	KUGO	1	613500	2353700	315	300	290	5.5	.	1	M9	25

2797	MAMALA	01JUL77	VARI	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2798	MAMALA	01JUL77	TURR	6	613500	2353700	315	300	290	5.5	.	1	M9	25
2799	MAMALA	01JUL77	HAMI	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2800	MAMALA	01JUL77	UPAT	1	613500	2353700	315	300	290	5.5	.	1	M9	25

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OBS	LOCATION	DATE	SPECIES	ALUND	ECCOORD	NCCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2801	MAMALA	01JUL77	ACTE	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2802	MAMALA	01JUL77	ATYS	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2803	MAMALA	01JUL77	ROCH	2	613500	2353700	315	300	290	5.5	.	1	M9	25
2804	MAMALA	01JUL77	TELL	3	613500	2353700	315	300	290	5.5	.	1	M9	25
2805	MAMALA	01JUL77	BOTH	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2806	MAMALA	01JUL77	CTEN	11	613500	2353700	315	300	290	5.5	.	1	M9	25
2807	MAMALA	01JUL77	COND	4	613500	2353700	315	300	290	5.5	.	1	M9	25
2808	MAMALA	01JUL77	PYRD	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2809	MAMALA	01JUL77	PUPA	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2810	MAMALA	01JUL77	SMAR	1	613500	2353700	315	300	290	5.5	.	1	M9	25
2811	MAMALA	01JUL77	CITH	19	618220	2353750	126	.	.	.	.	2	M18	10
2812	MAMALA	01JUL77	PARA	4	618220	2353750	126	.	.	.	.	2	M18	10
2813	MAMALA	01JUL77	DRBR	1	618220	2353750	126	.	.	.	.	2	M18	10
2814	MAMALA	01JUL77	PERP	20	618220	2353750	126	.	.	.	.	2	M18	10
2815	MAMALA	01JUL77	DIPL	4	618220	2353750	126	.	.	.	.	2	M18	10
2816	MAMALA	01JUL77	DIAL	16	618220	2353750	126	.	.	.	.	2	M18	10
2817	MAMALA	01JUL77	SCOP	1	618220	2353750	126	.	.	.	.	2	M18	10
2818	MAMALA	01JUL77	FULV	24	618220	2353750	126	.	.	.	.	2	M18	10
2819	MAMALA	01JUL77	SCAL	2	618220	2353750	126	.	.	.	.	2	M18	10
2820	MAMALA	01JUL77	BALC	16	618220	2353750	126	.	.	.	.	2	M18	10
2821	MAMALA	01JUL77	NATI	6	618220	2353750	126	.	.	.	.	2	M18	10
2822	MAMALA	01JUL77	KOGO	2	618220	2353750	126	.	.	.	.	2	M18	10
2823	MAMALA	01JUL77	MITR	1	618220	2353750	126	.	.	.	.	2	M18	10
2824	MAMALA	01JUL77	TELL	2	618220	2353750	126	.	.	.	.	2	M18	10
2825	MAMALA	01JUL77	BOTH	7	618220	2353750	126	.	.	.	.	2	M18	10
2826	MAMALA	01JUL77	TRIC	22	613300	2354650	93	.	.	.	.	2	M7	25
2827	MAMALA	01JUL77	MERL	1	613300	2354650	93	.	.	.	.	2	M7	25
2828	MAMALA	01JUL77	KMIL	2	613300	2354650	93	.	.	.	.	2	M7	25
2829	MAMALA	01JUL77	REPH	7	613300	2354650	93	.	.	.	.	2	M7	25
2830	MAMALA	01JUL77	RHUN	9	613300	2354650	93	.	.	.	.	2	M7	25
2831	MAMALA	01JUL77	CITH	135	613300	2354650	93	.	.	.	.	2	M7	25
2832	MAMALA	01JUL77	PARA	74	613300	2354650	93	.	.	.	.	2	M7	25
2833	MAMALA	01JUL77	LOPH	34	613300	2354650	93	.	.	.	.	2	M7	25
2834	MAMALA	01JUL77	ORBR	8	613300	2354650	93	.	.	.	.	2	M7	25
2835	MAMALA	01JUL77	CAEC	27	613300	2354650	93	.	.	.	.	2	M7	25
2836	MAMALA	01JUL77	BITL	1	613300	2354650	93	.	.	.	.	2	M7	25
2837	MAMALA	01JUL77	CERT	1	613300	2354650	93	.	.	.	.	2	M7	25
2838	MAMALA	01JUL77	PERP	217	613300	2354650	93	.	.	.	.	2	M7	25
2839	MAMALA	01JUL77	DIPL	4	613300	2354650	93	.	.	.	.	2	M7	25
2840	MAMALA	01JUL77	DIAL	86	613300	2354650	93	.	.	.	.	2	M7	25
2841	MAMALA	01JUL77	SCOP	3	613300	2354650	93	.	.	.	.	2	M7	25
2842	MAMALA	01JUL77	SCAL	71	613300	2354650	93	.	.	.	.	2	M7	25
2843	MAMALA	01JUL77	CERI	5	613300	2354650	93	.	.	.	.	2	M7	25
2844	MAMALA	01JUL77	TRIP	7	613300	2354650	93	.	.	.	.	2	M7	25
2845	MAMALA	01JUL77	EPIT	3	613300	2354650	93	.	.	.	.	2	M7	25
2846	MAMALA	01JUL77	BALC	1	613300	2354650	93	.	.	.	.	2	M7	25
2847	MAMALA	01JUL77	NATI	1	613300	2354650	93	.	.	.	.	2	M7	25
2848	MAMALA	01JUL77	KOGO	5	613300	2354650	93	.	.	.	.	2	M7	25
2849	MAMALA	01JUL77	SMIT	1	613300	2354650	93	.	.	.	.	2	M7	25
2850	MAMALA	01JUL77	CARI	2	613300	2354650	93	.	.	.	.	2	M7	25
2851	MAMALA	01JUL77	TURR	1	613300	2354650	93	.	.	.	.	2	M7	25
2852	MAMALA	01JUL77	HAMI	1	613300	2354650	93	.	.	.	.	2	M7	25
2853	MAMALA	01JUL77	MORU	1	613300	2354650	93	.	.	.	.	2	M7	25
2854	MAMALA	01JUL77	UIND	1	613300	2354650	93	.	.	.	.	2	M7	25
2855	MAMALA	01JUL77	DPAT	2	613300	2354650	93	2	M7	25
2856	MAMALA	01JUL77	UUUS	1	613300	2354650	93	2	M7	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2857	MAMALA	01JUL77	ACTE	2	613300	2354650	93	.	.	.	.	N	M7	25
2858	MAMALA	01JUL77	WILL	3	613300	2354650	93	.	.	.	.	N	M7	25
2859	MAMALA	01JUL77	OSTR	1	613300	2354650	93	.	.	.	.	N	M7	25
2860	MAMALA	01JUL77	LIMO	1	613300	2354650	93	.	.	.	.	N	M7	25
2861	MAMALA	01JUL77	PYRD	1	613300	2354650	93	.	.	.	.	N	M7	25
2862	MAMALA	01JUL77	SMAR	3	613300	2354650	93	.	.	.	.	N	M7	25
2863	MAMALA	01JUL77	EMSC	1	613300	2354210	252	.	.	.	.	N	M8	25
2864	MAMALA	01JUL77	FOSS	3	613300	2354210	252	.	.	.	.	N	M8	25
2865	MAMALA	01JUL77	TRIC	3	613300	2354210	252	.	.	.	.	N	M8	25
2866	MAMALA	01JUL77	BARL	5	613300	2354210	252	.	.	.	.	N	M8	25
2867	MAMALA	01JUL77	RMIL	1	613300	2354210	252	.	.	.	.	N	M8	25
2868	MAMALA	01JUL77	RHPH	1	613300	2354210	252	.	.	.	.	N	M8	25
2869	MAMALA	01JUL77	RHON	16	613300	2354210	252	.	.	.	.	N	M8	25
2870	MAMALA	01JUL77	CITH	28	613300	2354210	252	.	.	.	.	N	M8	25
2871	MAMALA	01JUL77	PARA	29	613300	2354210	252	.	.	.	.	N	M8	25
2872	MAMALA	01JUL77	LUPH	19	613300	2354210	252	.	.	.	.	N	M8	25
2873	MAMALA	01JUL77	ORBR	8	613300	2354210	252	.	.	.	.	N	M8	25
2874	MAMALA	01JUL77	JHR1	5	613300	2354210	252	.	.	.	.	N	M8	25
2875	MAMALA	01JUL77	CAEC	11	613300	2354210	252	.	.	.	.	N	M8	25
2876	MAMALA	01JUL77	BROU	3	613300	2354210	252	.	.	.	.	N	M8	25
2877	MAMALA	01JUL77	POWL	7	613300	2354210	252	.	.	.	.	N	M8	25
2878	MAMALA	01JUL77	PERP	165	613300	2354210	252	.	.	.	.	N	M8	25
2879	MAMALA	01JUL77	D1PL	1	613300	2354210	252	.	.	.	.	N	M8	25
2880	MAMALA	01JUL77	DIAL	131	613300	2354210	252	.	.	.	.	N	M8	25
2881	MAMALA	01JUL77	SCOP	226	613300	2354210	252	.	.	.	.	N	M8	25
2882	MAMALA	01JUL77	FULY	3	613300	2354210	252	.	.	.	.	N	M8	25
2883	MAMALA	01JUL77	ALAB	2	613300	2354210	252	.	.	.	.	N	M8	25
2884	MAMALA	01JUL77	SCAL	162	613300	2354210	252	.	.	.	.	N	M8	25
2885	MAMALA	01JUL77	TRIP	15	613300	2354210	252	.	.	.	.	N	M8	25
2886	MAMALA	01JUL77	BALC	32	613300	2354210	252	.	.	.	.	N	M8	25
2887	MAMALA	01JUL77	NATI	4	613300	2354210	252	.	.	.	.	N	M8	25
2888	MAMALA	01JUL77	KUGO	7	613300	2354210	252	.	.	.	.	N	M8	25
2889	MAMALA	01JUL77	CARI	1	613300	2354210	252	.	.	.	.	N	M8	25
2890	MAMALA	01JUL77	TURR	9	613300	2354210	252	.	.	.	.	N	M8	25
2891	MAMALA	01JUL77	TERE	1	613300	2354210	252	.	.	.	.	N	M8	25
2892	MAMALA	01JUL77	OIND	7	613300	2354210	252	.	.	.	.	N	M8	25
2893	MAMALA	01JUL77	OPAT	1	613300	2354210	252	.	.	.	.	N	M8	25
2894	MAMALA	01JUL77	DDOS	1	613300	2354210	252	.	.	.	.	N	M8	25
2895	MAMALA	01JUL77	ACTE	4	613300	2354210	252	.	.	.	.	N	M8	25
2896	MAMALA	01JUL77	ATYS	3	613300	2354210	252	.	.	.	.	N	M8	25
2897	MAMALA	01JUL77	CHLA	2	613300	2354210	252	.	.	.	.	N	M8	25
2898	MAMALA	01JUL77	ROCH	3	613300	2354210	252	.	.	.	.	N	M8	25
2899	MAMALA	01JUL77	OSTR	2	613300	2354210	252	.	.	.	.	N	M8	25
2900	MAMALA	01JUL77	TELL	3	613300	2354210	252	.	.	.	.	N	M8	25
2901	MAMALA	01JUL77	BOTH	2	613300	2354210	252	.	.	.	.	N	M8	25
2902	MAMALA	01JUL77	TURB	1	613300	2354210	252	.	.	.	.	N	M8	25
2903	MAMALA	01JUL77	CUND	3	613300	2354210	252	.	.	.	.	N	M8	25
2904	MAMALA	01JUL77	PYRD	1	613300	2354210	252	.	.	.	.	N	M8	25
2905	MAMALA	01JUL77	PUPA	1	613300	2354210	252	.	.	.	.	N	M8	25
2906	MAMALA	23OCT79	ALCY	6	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2907	MAMALA	23OCT79	FOSS	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2908	MAMALA	23OCT79	RUBR	4	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2909	MAMALA	23OCT79	TRIC	86	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2910	MAMALA	23OCT79	RISO	4	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2911	MAMALA	23OCT79	MERL	7	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2912	MAMALA	23OCT79	RGNA	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2913	MAMALA	23OCT79	SYNA	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2914	MAMALA	23OCT79	RMIL	4	618600	2353350	189	270	180	2.4	1.2	1	M1	25

2915	MAMALA	230CT79	SMAR	4	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2916	MAMALA	230CT79	PLAN	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2917	MAMALA	230CT79	PARA	11	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2918	MAMALA	230CT79	ZLBJ	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2919	MAMALA	230CT79	ALVA	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2920	MAMALA	230CT79	HAPL	8	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2921	MAMALA	230CT79	URBR	29	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2922	MAMALA	230CT79	URBI	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2923	MAMALA	230CT79	BITP	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2924	MAMALA	230CT79	BITI	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2925	MAMALA	230CT79	CERT	3	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2926	MAMALA	230CT79	PERP	32	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2927	MAMALA	230CT79	DIPL	28	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2928	MAMALA	230CT79	DIAL	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2929	MAMALA	230CT79	ALAB	8	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2930	MAMALA	230CT79	SCAL	3	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2931	MAMALA	230CT79	TRIP	10	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2932	MAMALA	230CT79	EPIT	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2933	MAMALA	230CT79	BALC	8	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2934	MAMALA	230CT79	NATI	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2935	MAMALA	230CT79	OTME	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2936	MAMALA	230CT79	KUGU	6	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2937	MAMALA	230CT79	MITM	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2938	MAMALA	230CT79	SMIT	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2939	MAMALA	230CT79	TURR	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2940	MAMALA	230CT79	MURU	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2941	MAMALA	230CT79	OPAT	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2942	MAMALA	230CT79	ODOS	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2943	MAMALA	230CT79	ACTE	5	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2944	MAMALA	230CT79	ATYS	3	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2945	MAMALA	230CT79	PYRA	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2946	MAMALA	230CT79	BARB	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2947	MAMALA	230CT79	OSTR	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2948	MAMALA	230CT79	TELL	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2949	MAMALA	230CT79	BOTH	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2950	MAMALA	230CT79	PUPA	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2951	MAMALA	230CT79	BULL	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2952	MAMALA	230CT79	CUND	1	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2953	MAMALA	230CT79	CAEC	5	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2954	MAMALA	230CT79	ROCH	2	618600	2353350	189	270	180	2.4	1.2	1	M1	25
2955	MAMALA	230CT79	TRIC	9	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2956	MAMALA	230CT79	RISU	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2957	MAMALA	230CT79	RMIL	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2958	MAMALA	230CT79	CITH	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2959	MAMALA	230CT79	PARA	5	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2960	MAMALA	230CT79	HAPL	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2961	MAMALA	230CT79	ORBR	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2962	MAMALA	230CT79	ORBI	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2963	MAMALA	230CT79	PERP	22	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2964	MAMALA	230CT79	DIAL	13	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2965	MAMALA	230CT79	SCOP	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2966	MAMALA	230CT79	FULV	13	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2967	MAMALA	230CT79	SCAL	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2968	MAMALA	230CT79	TRIP	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5

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OBS	LOCATION	DATE	SPECIES	ABUND	COORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
2969	MAMALA	230CT79	EPIT	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2970	MAMALA	230CT79	BALC	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2971	MAMALA	230CT79	NATI	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2972	MAMALA	230CT79	KUGU	3	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2973	MAMALA	230CT79	TURR	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2974	MAMALA	230CT79	MITR	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2975	MAMALA	230CT79	DIND	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2976	MAMALA	230CT79	OPAT	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5

2977	MAMALA	230CT79	ACTE	2	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2978	MAMALA	230CT79	ATYS	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2979	MAMALA	230CT79	TELL	2	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2980	MAMALA	230CT79	HEMI	1	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2981	MAMALA	230CT79	BISC	8	612220	2354150	200	210	230	4.1	9.6	1	M10	5
2982	MAMALA	230CT79	DIUD	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2983	MAMALA	230CT79	EMSC	4	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2984	MAMALA	230CT79	FUSS	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2985	MAMALA	230CT79	RUBR	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2986	MAMALA	230CT79	TRIC	41	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2987	MAMALA	230CT79	RISO	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2988	MAMALA	230CT79	BARL	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2989	MAMALA	230CT79	MERL	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2990	MAMALA	230CT79	HEPH	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2991	MAMALA	230CT79	SMAR	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2992	MAMALA	230CT79	CITH	26	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2993	MAMALA	230CT79	PARA	9	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2994	MAMALA	230CT79	HAPL	8	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2995	MAMALA	230CT79	ORBR	28	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2996	MAMALA	230CT79	URBI	6	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2997	MAMALA	230CT79	BITP	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2998	MAMALA	230CT79	PEKP	10	612100	2354650	100	480	250	8.7	2.4	1	M13	10
2999	MAMALA	230CT79	DIPL	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3000	MAMALA	230CT79	DIAL	8	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3001	MAMALA	230CT79	ALAB	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3002	MAMALA	230CT79	SCAL	12	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3003	MAMALA	230CT79	EPLI	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3004	MAMALA	230CT79	HIPP	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3005	MAMALA	230CT79	KOGG	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3006	MAMALA	230CT79	UDOS	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3007	MAMALA	230CT79	ACTE	5	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3008	MAMALA	230CT79	WILL	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3009	MAMALA	230CT79	BRYA	2	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3010	MAMALA	230CT79	BOTH	3	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3011	MAMALA	230CT79	HAMI	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3012	MAMALA	230CT79	CTEN	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3013	MAMALA	230CT79	NUCU	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3014	MAMALA	230CT79	CAEC	3	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3015	MAMALA	230CT79	ROCH	1	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3016	MAMALA	230CT79	BRDD	5	612100	2354650	100	480	250	8.7	2.4	1	M13	10
3017	MAMALA	230CT79	EMSC	1	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3018	MAMALA	230CT79	BTUH	1	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3019	MAMALA	230CT79	CITH	1	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3020	MAMALA	230CT79	HAPL	1	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3021	MAMALA	230CT79	ORBR	2	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3022	MAMALA	230CT79	SCUP	2	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3023	MAMALA	230CT79	ATYS	2	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3024	MAMALA	230CT79	BULL	1	616370	2354400	120	660	480	11.0	1.3	1	M16	3

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OBS	LOCATION	DATE	SPECIES	ABUND	COORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3025	MAMALA	230CT79	TELL	1	616370	2354400	120	660	480	11.0	1.3	1	M16	3
3026	MAMALA	230CT79	RUBR	1	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3027	MAMALA	230CT79	TRIC	6	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3028	MAMALA	230CT79	RISO	1	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3029	MAMALA	230CT79	PARA	3	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3030	MAMALA	230CT79	HAPL	1	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3031	MAMALA	230CT79	STRE	1	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3032	MAMALA	230CT79	PEKP	7	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3033	MAMALA	230CT79	DIPL	2	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3034	MAMALA	230CT79	DIAL	8	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3035	MAMALA	230CT79	SCOP	3	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3036	MAMALA	230CT79	FULV	31	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3037	MAMALA	230CT79	SCAL	6	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3038	MAMALA	230CT79	BARL	7	616210	2353950	300	690	260	4.1	1.2	1	M17	10

3039	MAMALA	230CT79	NATI	2	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3040	MAMALA	230CT79	KOGO	2	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3041	MAMALA	230CT79	TURK	3	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3042	MAMALA	230CT79	OIND	2	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3043	MAMALA	230CT79	ACTE	4	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3044	MAMALA	230CT79	TELL	7	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3045	MAMALA	230CT79	LIMO	1	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3046	MAMALA	230CT79	BISC	2	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3047	MAMALA	230CT79	CTFN	1	616210	2353950	300	690	260	4.1	1.2	1	M17	10
3048	MAMALA	230CT79	TRIC	3	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3049	MAMALA	230CT79	RUBR	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3050	MAMALA	230CT79	RISU	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3051	MAMALA	230CT79	RMIL	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3052	MAMALA	230CT79	REPH	3	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3053	MAMALA	230CT79	RHDN	9	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3054	MAMALA	230CT79	OTHE	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3055	MAMALA	230CT79	CITH	31	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3056	MAMALA	230CT79	PARA	49	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3057	MAMALA	230CT79	POWL	29	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3058	MAMALA	230CT79	HAPL	20	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3059	MAMALA	230CT79	STRE	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3060	MAMALA	230CT79	HIPP	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3061	MAMALA	230CT79	PLES	3	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3062	MAMALA	230CT79	CERT	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3063	MAMALA	230CT79	PERP	144	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3064	MAMALA	230CT79	DIPL	6	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3065	MAMALA	230CT79	DIAL	103	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3066	MAMALA	230CT79	ALAB	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3067	MAMALA	230CT79	SCAL	42	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3068	MAMALA	230CT79	CERI	3	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3069	MAMALA	230CT79	TRIP	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3070	MAMALA	230CT79	BALC	2	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3071	MAMALA	230CT79	NATI	2	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3072	MAMALA	230CT79	KOGO	2	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3073	MAMALA	230CT79	TURR	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3074	MAMALA	230CT79	ACTE	2	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3075	MAMALA	230CT79	ODOS	2	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3076	MAMALA	230CT79	ATYS	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3077	MAMALA	230CT79	MITR	2	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3078	MAMALA	230CT79	OPAT	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3079	MAMALA	230CT79	ROCH	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3080	MAMALA	230CT79	TELL	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25

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OBS.	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3081	MAMALA	230CT79	BISC	1	618220	2353750	120	420	370	4.4	1.0	1	M18	25
3082	MAMALA	230CT79	ALCY	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3083	MAMALA	230CT79	REPH	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3084	MAMALA	230CT79	RHUN	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3085	MAMALA	230CT79	CITH	13	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3086	MAMALA	230CT79	PARA	8	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3087	MAMALA	230CT79	HAPL	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3088	MAMALA	230CT79	URBI	2	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3089	MAMALA	230CT79	CAEC	3	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3090	MAMALA	230CT79	PERP	19	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3091	MAMALA	230CT79	DIAL	5	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3092	MAMALA	230CT79	SCUP	36	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3093	MAMALA	230CT79	FULV	43	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3094	MAMALA	230CT79	SCAL	20	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3095	MAMALA	230CT79	EPLT	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3096	MAMALA	230CT79	BALC	17	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3097	MAMALA	230CT79	KOGO	7	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3098	MAMALA	230CT79	TURR	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3099	MAMALA	230CT79	MITR	3	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3100	MAMALA	230CT79	MITM	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10

3101	MAMALA	230CT79	UIND	3	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3102	MAMALA	230CT79	USTR	1	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3103	MAMALA	230CT79	BISC	7	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3104	MAMALA	230CT79	COND	3	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3105	MAMALA	230CT79	OIND	3	617650	2353500	300	660	250	10.0	1.0	1	M19	10
3106	MAMALA	230CT79	UIUD	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3107	MAMALA	230CT79	FOSS	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3108	MAMALA	230CT79	RUUR	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3109	MAMALA	230CT79	TRIC	19	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3110	MAMALA	230CT79	SYNA	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3111	MAMALA	230CT79	RTUR	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3112	MAMALA	230CT79	CITH	30	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3113	MAMALA	230CT79	PARA	10	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3114	MAMALA	230CT79	HAPL	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3115	MAMALA	230CT79	URBR	5	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3116	MAMALA	230CT79	URBI	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3117	MAMALA	230CT79	CREP	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3118	MAMALA	230CT79	BITP	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3119	MAMALA	230CT79	PERP	23	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3120	MAMALA	230CT79	DIPL	7	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3121	MAMALA	230CT79	DIAL	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3122	MAMALA	230CT79	FULV	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3123	MAMALA	230CT79	SCAL	4	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3124	MAMALA	230CT79	HELI	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3125	MAMALA	230CT79	NATI	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3126	MAMALA	230CT79	KOGO	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3127	MAMALA	230CT79	SAND	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3128	MAMALA	230CT79	ACTE	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3129	MAMALA	230CT79	ATYS	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3130	MAMALA	230CT79	BRAC	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3131	MAMALA	230CT79	BARB	3	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3132	MAMALA	230CT79	HEMI	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3133	MAMALA	230CT79	BOTH	4	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3134	MAMALA	230CT79	BISC	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3135	MAMALA	230CT79	BULL	2	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3136	MAMALA	230CT79	CAEC	3	614500	2354300	200	330	410	14.0	2.3	1	M6	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3137	MAMALA	230CT79	ROCH	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3138	MAMALA	230CT79	BITH	1	614500	2354300	200	330	410	14.0	2.3	1	M6	10
3139	MAMALA	230CT79	RUBR	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3140	MAMALA	230CT79	TRIC	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3141	MAMALA	230CT79	RISO	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3142	MAMALA	230CT79	RAMB	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3143	MAMALA	230CT79	RMIL	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3144	MAMALA	230CT79	SMAR	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3145	MAMALA	230CT79	CITH	38	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3146	MAMALA	230CT79	PARA	10	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3147	MAMALA	230CT79	HAPL	3	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3148	MAMALA	230CT79	URBR	3	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3149	MAMALA	230CT79	STRE	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3150	MAMALA	230CT79	PERP	22	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3151	MAMALA	230CT79	DIPL	8	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3152	MAMALA	230CT79	DIAL	4	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3153	MAMALA	230CT79	SCAL	6	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3154	MAMALA	230CT79	TRIP	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3155	MAMALA	230CT79	HELI	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3156	MAMALA	230CT79	HIPP	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3157	MAMALA	230CT79	NATI	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3158	MAMALA	230CT79	CANI	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3159	MAMALA	230CT79	TURR	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3160	MAMALA	230CT79	TERE	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3161	MAMALA	230CT79	OIND	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3162	MAMALA	230CT79	UROS	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10

3163	MAMALA	230CT79	ACTE	25	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3164	MAMALA	230CT79	JULI	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3165	MAMALA	230CT79	WILL	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3166	MAMALA	230CT79	PYRA	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3167	MAMALA	230CT79	CHLA	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3168	MAMALA	230CT79	USTK	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3169	MAMALA	230CT79	BRYA	3	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3170	MAMALA	230CT79	BUTH	6	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3171	MAMALA	230CT79	BISC	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3172	MAMALA	230CT79	CAEC	2	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3173	MAMALA	230CT79	RUCH	1	613300	2354650	110	480	450	12.0	2.2	1	M7	10
3174	MAMALA	230CT79	CITH	12	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3175	MAMALA	230CT79	PARA	6	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3176	MAMALA	230CT79	HAPL	6	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3177	MAMALA	230CT79	BITH	1	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3178	MAMALA	230CT79	PERP	42	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3179	MAMALA	230CT79	DIAL	16	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3180	MAMALA	230CT79	SCOP	95	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3181	MAMALA	230CT79	FULV	4	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3182	MAMALA	230CT79	SCAL	25	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3183	MAMALA	230CT79	TRIP	2	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3184	MAMALA	230CT79	LP11	4	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3185	MAMALA	230CT79	HALC	69	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3186	MAMALA	230CT79	NATI	1	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3187	MAMALA	230CT79	KOGQ	6	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3188	MAMALA	230CT79	TURR	1	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3189	MAMALA	230CT79	ACTE	3	613300	2354210	260	480	240	3.9	23.0	1	M8	5
3190	MAMALA	230CT79	REPH	1	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3191	MAMALA	230CT79	CITH	1	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3192	MAMALA	230CT79	PARA	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5

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OBS	LOCATION	DATE	SPECIES	ABUND	EQQHD	NCQQRD	DEPTH	OXDEMANO	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3193	MAMALA	230CT79	HAPL	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3194	MAMALA	230CT79	PERP	22	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3195	MAMALA	230CT79	DIAL	6	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3196	MAMALA	230CT79	SCOP	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3197	MAMALA	230CT79	FULV	32	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3198	MAMALA	230CT79	SCAL	6	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3199	MAMALA	230CT79	HALC	16	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3200	MAMALA	230CT79	NATI	1	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3201	MAMALA	230CT79	KOGQ	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3202	MAMALA	230CT79	TURR	1	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3203	MAMALA	230CT79	ACTE	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3204	MAMALA	230CT79	ATYS	1	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3205	MAMALA	230CT79	QIND	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3206	MAMALA	230CT79	QIND	2	613500	2353700	260	300	290	4.8	8.3	1	M9	5
3207	MAMALA	230CT79	DIOD	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3208	MAMALA	230CT79	EMSC	3	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3209	MAMALA	230CT79	ALCY	6	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3210	MAMALA	230CT79	FUSS	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3211	MAMALA	230CT79	RUHR	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3212	MAMALA	230CT79	TRIC	30	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3213	MAMALA	230CT79	RISU	6	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3214	MAMALA	230CT79	SMAR	3	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3215	MAMALA	230CT79	CITH	83	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3216	MAMALA	230CT79	PARA	6	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3217	MAMALA	230CT79	ORBR	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3218	MAMALA	230CT79	STRE	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3219	MAMALA	230CT79	HITH	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3220	MAMALA	230CT79	PLES	3	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3221	MAMALA	230CT79	CERT	4	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3222	MAMALA	230CT79	PERP	9	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3223	MAMALA	230CT79	DIPL	9	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3224	MAMALA	230CT79	ALAH	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10

3225	MAMALA	23OCT79	TRIP	5	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3226	MAMALA	23OCT79	EPII	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3227	MAMALA	23OCT79	BALC	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3228	MAMALA	23OCT79	HIPP	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3229	MAMALA	23OCT79	NATI	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3230	MAMALA	23OCT79	UTHE	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3231	MAMALA	23OCT79	KOGO	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3232	MAMALA	23OCT79	SAND	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3233	MAMALA	23OCT79	TURR	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3234	MAMALA	23OCT79	UUUS	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3235	MAMALA	23OCT79	ACTE	3	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3236	MAMALA	23OCT79	ATYS	5	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3237	MAMALA	23OCT79	JULI	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3238	MAMALA	23OCT79	WILL	0	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3239	MAMALA	23OCT79	USTR	4	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3240	MAMALA	23OCT79	TELL	15	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3241	MAMALA	23OCT79	BOTH	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3242	MAMALA	23OCT79	BISC	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3243	MAMALA	23OCT79	HAMI	1	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3244	MAMALA	23OCT79	BULL	2	618600	2353350	177	300	250	4.9	1.0	N	M1	10
3245	MAMALA	23OCT79	TRIC	9	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3246	MAMALA	23OCT79	RMIL	1	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3247	MAMALA	23OCT79	CITH	18	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3248	MAMALA	23OCT79	PARA	6	612220	2354150	200	420	300	5.0	15.0	N	M10	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3249	MAMALA	23OCT79	HAPL	2	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3250	MAMALA	23OCT79	ORBR	3	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3251	MAMALA	23OCT79	ORBI	1	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3252	MAMALA	23OCT79	PERP	32	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3253	MAMALA	23OCT79	DIAL	37	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3254	MAMALA	23OCT79	SCOP	3	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3255	MAMALA	23OCT79	FULV	61	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3256	MAMALA	23OCT79	SCAL	4	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3257	MAMALA	23OCT79	TRIP	5	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3258	MAMALA	23OCT79	HELI	1	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3259	MAMALA	23OCT79	EPII	3	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3260	MAMALA	23OCT79	BALC	12	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3261	MAMALA	23OCT79	NATI	6	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3262	MAMALA	23OCT79	KUGU	1	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3263	MAMALA	23OCT79	OIND	4	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3264	MAMALA	23OCT79	UUUS	3	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3265	MAMALA	23OCT79	ACTE	3	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3266	MAMALA	23OCT79	TELL	4	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3267	MAMALA	23OCT79	BOTH	1	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3268	MAMALA	23OCT79	BISC	21	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3269	MAMALA	23OCT79	PUPA	2	612220	2354150	200	420	300	5.0	15.0	N	M10	25
3270	MAMALA	23OCT79	CAEC	2	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3271	MAMALA	23OCT79	DIGD	2	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3272	MAMALA	23OCT79	EMSC	2	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3273	MAMALA	23OCT79	ALCY	2	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3274	MAMALA	23OCT79	FUSS	1	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3275	MAMALA	23OCT79	TRIC	17	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3276	MAMALA	23OCT79	RISU	1	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3277	MAMALA	23OCT79	CITH	30	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3278	MAMALA	23OCT79	PARA	6	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3279	MAMALA	23OCT79	HAPL	5	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3280	MAMALA	23OCT79	URBR	14	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3281	MAMALA	23OCT79	ORBI	13	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3282	MAMALA	23OCT79	PERP	19	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3283	MAMALA	23OCT79	DIPL	2	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3284	MAMALA	23OCT79	DIAL	3	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3285	MAMALA	23OCT79	SCAL	10	612100	2354650	100	540	290	8.0	3.6	N	M13	10
3286	MAMALA	23OCT79	BALC	2	612100	2354650	100	540	290	8.0	3.6	N	M13	10

3287	MAMALA	230CT79	HIPP	2	612100	2354650	100	540	290	8.0	3.6		M13	10
3288	MAMALA	230CT79	TURR	1	612100	2354650	100	540	290	8.0	3.6		M13	10
3289	MAMALA	230CT79	ACTE	2	612100	2354650	100	540	290	8.0	3.6		M13	10
3290	MAMALA	230CT79	WILL	1	612100	2354650	100	540	290	8.0	3.6		M13	10
3291	MAMALA	230CT79	BRYA	1	612100	2354650	100	540	290	8.0	3.6		M13	10
3292	MAMALA	230CT79	HEMI	4	612100	2354650	100	540	290	8.0	3.6		M13	10
3293	MAMALA	230CT79	LIMU	2	612100	2354650	100	540	290	8.0	3.6		M13	10
3294	MAMALA	230CT79	BOTH	1	612100	2354650	100	540	290	8.0	3.6		M13	10
3295	MAMALA	230CT79	BISC	1	612100	2354650	100	540	290	8.0	3.6		M13	10
3296	MAMALA	230CT79	RUCH	2	612100	2354650	100	540	290	8.0	3.6		M13	10
3297	MAMALA	230CT79	BRDD	2	612100	2354650	100	540	290	8.0	3.6		M13	10
3298	MAMALA	230CT79	EMSC	3	616370	2354400	120	1080	350	6.1	43.0		M16	10
3299	MAMALA	230CT79	ALCY	1	616370	2354400	120	1080	350	6.1	43.0		M16	10
3300	MAMALA	230CT79	RUBR	1	616370	2354400	120	1080	350	6.1	43.0		M16	10
3301	MAMALA	230CT79	CITH	2	616370	2354400	120	1080	350	6.1	43.0		M16	10
3302	MAMALA	230CT79	PARA	3	616370	2354400	120	1080	350	6.1	43.0		M16	10
3303	MAMALA	230CT79	ORBR	3	616370	2354400	120	1080	350	6.1	43.0		M16	10
3304	MAMALA	230CT79	ORBI	2	616370	2354400	120	1080	350	6.1	43.0		M16	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECUORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3305	MAMALA	230CT79	STRE	1	616370	2354400	120	1080	350	6.1	43		M16	10
3306	MAMALA	230CT79	PERP	6	616370	2354400	120	1080	350	6.1	43		M16	10
3307	MAMALA	230CT79	DIAL	1	616370	2354400	120	1080	350	6.1	43		M16	10
3308	MAMALA	230CT79	BULL	1	616370	2354400	120	1080	350	6.1	43		M16	10
3309	MAMALA	230CT79	CHLA	1	616370	2354400	120	1080	350	6.1	43		M16	10
3310	MAMALA	230CT79	RDCH	4	616370	2354400	120	1080	350	6.1	43		M16	10
3311	MAMALA	230CT79	TELL	2	616370	2354400	120	1080	350	6.1	43		M16	10
3312	MAMALA	230CT79	RISO	3	616210	2353950	300	690	240	5.4	1		M17	10
3313	MAMALA	230CT79	CITH	1	616210	2353950	300	690	240	5.4	1		M17	10
3314	MAMALA	230CT79	PARA	1	616210	2353950	300	690	240	5.4	1		M17	10
3315	MAMALA	230CT79	HAPL	3	616210	2353950	300	690	240	5.4	1		M17	10
3316	MAMALA	230CT79	ORBR	5	616210	2353950	300	690	240	5.4	1		M17	10
3317	MAMALA	230CT79	CREP	2	616210	2353950	300	690	240	5.4	1		M17	10
3318	MAMALA	230CT79	PERP	23	616210	2353950	300	690	240	5.4	1		M17	10
3319	MAMALA	230CT79	DIAL	23	616210	2353950	300	690	240	5.4	1		M17	10
3320	MAMALA	230CT79	SCUP	23	616210	2353950	300	690	240	5.4	1		M17	10
3321	MAMALA	230CT79	FULV	36	616210	2353950	300	690	240	5.4	1		M17	10
3322	MAMALA	230CT79	SCAL	3	616210	2353950	300	690	240	5.4	1		M17	10
3323	MAMALA	230CT79	BALC	14	616210	2353950	300	690	240	5.4	1		M17	10
3324	MAMALA	230CT79	NATI	6	616210	2353950	300	690	240	5.4	1		M17	10
3325	MAMALA	230CT79	TURR	2	616210	2353950	300	690	240	5.4	1		M17	10
3326	MAMALA	230CT79	MORU	1	616210	2353950	300	690	240	5.4	1		M17	10
3327	MAMALA	230CT79	OIND	11	616210	2353950	300	690	240	5.4	1		M17	10
3328	MAMALA	230CT79	ODDS	1	616210	2353950	300	690	240	5.4	1		M17	10
3329	MAMALA	230CT79	ACTE	11	616210	2353950	300	690	240	5.4	1		M17	10
3330	MAMALA	230CT79	AIYS	3	616210	2353950	300	690	240	5.4	1		M17	10
3331	MAMALA	230CT79	PYRA	5	616210	2353950	300	690	240	5.4	1		M17	10
3332	MAMALA	230CT79	TELL	3	616210	2353950	300	690	240	5.4	1		M17	10
3333	MAMALA	230CT79	BISC	3	616210	2353950	300	690	240	5.4	1		M17	10
3334	MAMALA	230CT79	PUPA	1	616210	2353950	300	690	240	5.4	1		M17	10
3335	MAMALA	230CT79	CTEN	2	616210	2353950	300	690	240	5.4	1		M17	10
3336	MAMALA	230CT79	TRIC	17	618220	2353750	120	420	340	6.5	1		M18	10
3337	MAMALA	230CT79	RUBR	2	618220	2353750	120	420	340	6.5	1		M18	10
3338	MAMALA	230CT79	RISO	3	618220	2353750	120	420	340	6.5	1		M18	10
3339	MAMALA	230CT79	RMIL	2	618220	2353750	120	420	340	6.5	1		M18	10
3340	MAMALA	230CT79	REPH	2	618220	2353750	120	420	340	6.5	1		M18	10
3341	MAMALA	230CT79	RHON	9	618220	2353750	120	420	340	6.5	1		M18	10
3342	MAMALA	230CT79	CITH	44	618220	2353750	120	420	340	6.5	1		M18	10
3343	MAMALA	230CT79	PARA	27	618220	2353750	120	420	340	6.5	1		M18	10
3344	MAMALA	230CT79	HAPL	10	618220	2353750	120	420	340	6.5	1		M18	10
3345	MAMALA	230CT79	ORBR	2	618220	2353750	120	420	340	6.5	1		M18	10
3346	MAMALA	230CT79	ORBI	1	618220	2353750	120	420	340	6.5	1		M18	10
3347	MAMALA	230CT79	PLES	1	618220	2353750	120	420	340	6.5	1		M18	10
3348	MAMALA	230CT79	PERP	143	618220	2353750	120	420	340	6.5	1		M18	10

3349	MAMALA	230CT79	DIPL	6	618220	2353750	120	420	340	6.5	1	N	M18	10
3350	MAMALA	230CT79	DIAL	53	618220	2353750	120	420	340	6.5	1	N	M18	10
3351	MAMALA	230CT79	SCUP	1	618220	2353750	120	420	340	6.5	1	N	M18	10
3352	MAMALA	230CT79	SCAL	39	618220	2353750	120	420	340	6.5	1	N	M18	10
3353	MAMALA	230CT79	TRIP	13	618220	2353750	120	420	340	6.5	1	N	M18	10
3354	MAMALA	230CT79	BALC	9	618220	2353750	120	420	340	6.5	1	N	M18	10
3355	MAMALA	230CT79	NATI	1	618220	2353750	120	420	340	6.5	1	N	M18	10
3356	MAMALA	230CT79	KOGO	7	618220	2353750	120	420	340	6.5	1	N	M18	10
3357	MAMALA	230CT79	TURR	1	618220	2353750	120	420	340	6.5	1	N	M18	10
3358	MAMALA	230CT79	PYRA	1	618220	2353750	120	420	340	6.5	1	N	M18	10
3359	MAMALA	230CT79	ODOS	3	618220	2353750	120	420	340	6.5	1	N	M18	10
3360	MAMALA	230CT79	OIND	3	618220	2353750	120	420	340	6.5	1	N	M18	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCOORD	NCCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3361	MAMALA	230CT79	RDCH	1	618220	2353750	120	420	340	6.5	1.0	N	M18	10
3362	MAMALA	230CT79	TELL	1	618220	2353750	120	420	340	6.5	1.0	N	M18	10
3363	MAMALA	230CT79	BISC	1	618220	2353750	120	420	340	6.5	1.0	N	M18	10
3364	MAMALA	230CT79	OIND	3	618220	2353750	120	420	340	6.5	1.0	N	M18	10
3365	MAMALA	230CT79	RUBR	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3366	MAMALA	230CT79	RMIL	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3367	MAMALA	230CT79	REPH	9	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3368	MAMALA	230CT79	RMON	27	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3369	MAMALA	230CT79	CITH	7	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3370	MAMALA	230CT79	PARA	4	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3371	MAMALA	230CT79	HAPL	4	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3372	MAMALA	230CT79	DRBR	2	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3373	MAMALA	230CT79	CAEC	18	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3374	MAMALA	230CT79	BROU	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3375	MAMALA	230CT79	CERT	30	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3376	MAMALA	230CT79	PERP	45	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3377	MAMALA	230CT79	DIAL	18	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3378	MAMALA	230CT79	SCUP	62	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3379	MAMALA	230CT79	ALAB	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3380	MAMALA	230CT79	SCAL	5	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3381	MAMALA	230CT79	CERI	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3382	MAMALA	230CT79	TRIP	10	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3383	MAMALA	230CT79	BALC	12	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3384	MAMALA	230CT79	NATI	4	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3385	MAMALA	230CT79	KOGO	6	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3386	MAMALA	230CT79	ACTE	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3387	MAMALA	230CT79	PYRA	2	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3388	MAMALA	230CT79	ATYS	2	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3389	MAMALA	230CT79	SAND	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3390	MAMALA	230CT79	OPAT	2	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3392	MAMALA	230CT79	BARB	3	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3393	MAMALA	230CT79	BRYA	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3394	MAMALA	230CT79	BISC	1	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3395	MAMALA	230CT79	COND	2	617650	2353500	330	180	250	3.8	1.0	N	M19	10
3396	MAMALA	230CT79	CTEN	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3397	MAMALA	230CT79	EMSC	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3398	MAMALA	230CT79	FOSS	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3399	MAMALA	230CT79	EUCH	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3400	MAMALA	230CT79	RUBR	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3401	MAMALA	230CT79	TRIC	23	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3402	MAMALA	230CT79	RISO	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3403	MAMALA	230CT79	MERL	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3404	MAMALA	230CT79	KMIL	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3405	MAMALA	230CT79	REPH	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3406	MAMALA	230CT79	CITH	46	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3407	MAMALA	230CT79	PARA	6	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3408	MAMALA	230CT79	HAPL	9	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3409	MAMALA	230CT79	DRBR	8	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3410	MAMALA	230CT79	URBT	5	614500	2354300	200	480	280	7.9	3.5	N	M6	25

3411	MAMALA	230CT79	BITP	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3412	MAMALA	230CT79	BITZ	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3413	MAMALA	230CT79	BITI	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3414	MAMALA	230CT79	CERT	3	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3415	MAMALA	230CT79	PERP	17	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3416	MAMALA	230CT79	DIPL	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCORD	NCORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3417	MAMALA	230CT79	DIAL	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3418	MAMALA	230CT79	SCUP	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3419	MAMALA	230CT79	ALAB	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3420	MAMALA	230CT79	SCAL	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3421	MAMALA	230CT79	PLES	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3422	MAMALA	230CT79	TRIP	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3423	MAMALA	230CT79	BALC	3	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3424	MAMALA	230CT79	HIPP	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3425	MAMALA	230CT79	NATI	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3426	MAMALA	230CT79	KUGU	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3427	MAMALA	230CT79	MITM	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3428	MAMALA	230CT79	SMIT	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3429	MAMALA	230CT79	TURR	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3430	MAMALA	230CT79	DDOS	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3431	MAMALA	230CT79	ATYS	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3432	MAMALA	230CT79	JULI	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3433	MAMALA	230CT79	WILL	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3434	MAMALA	230CT79	PYRA	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3435	MAMALA	230CT79	HARR	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3436	MAMALA	230CT79	CHLA	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3437	MAMALA	230CT79	TELL	3	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3438	MAMALA	230CT79	HOTH	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3439	MAMALA	230CT79	BISC	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3440	MAMALA	230CT79	CTEN	1	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3441	MAMALA	230CT79	BULL	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3442	MAMALA	230CT79	CAEC	2	614500	2354300	200	480	280	7.9	3.5	N	M6	25
3443	MAMALA	230CT79	EMSC	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3444	MAMALA	230CT79	ALCY	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3445	MAMALA	230CT79	RUBR	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3446	MAMALA	230CT79	IRIC	5	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3447	MAMALA	230CT79	RAMB	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3448	MAMALA	230CT79	SMAR	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3449	MAMALA	230CT79	CITH	11	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3450	MAMALA	230CT79	PARA	7	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3451	MAMALA	230CT79	HAPL	9	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3452	MAMALA	230CT79	URBR	17	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3453	MAMALA	230CT79	STRE	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3454	MAMALA	230CT79	PERP	6	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3455	MAMALA	230CT79	DIPL	5	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3456	MAMALA	230CT79	DIAL	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3457	MAMALA	230CT79	SCAL	6	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3458	MAMALA	230CT79	EPIT	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3459	MAMALA	230CT79	BALC	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3460	MAMALA	230CT79	HIPP	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3461	MAMALA	230CT79	NATI	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3462	MAMALA	230CT79	KDGO	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3463	MAMALA	230CT79	ACTE	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3464	MAMALA	230CT79	JULI	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3465	MAMALA	230CT79	WILL	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3466	MAMALA	230CT79	BRVA	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3467	MAMALA	230CT79	TELL	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3468	MAMALA	230CT79	BISC	3	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3469	MAMALA	230CT79	CTEN	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3470	MAMALA	230CT79	CAEC	1	613300	2354650	110	360	330	8.9	3.6	N	M7	10
3471	MAMALA	230CT79	TRIC	27	613300	2354210	180	390	420	10.0	11.0	N	M8	10
3472	MAMALA	230CT79	RUBR	2	613300	2354210	180	390	420	10.0	11.0	N	M8	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOURD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3473	MAMALA	23OCT79	SMAR	1	613300	2354210	180	390	420	10.0	11		MB	10
3474	MAMALA	23OCT79	RHON	6	613300	2354210	180	390	420	10.0	11		MB	10
3475	MAMALA	23OCT79	CITH	63	613300	2354210	180	390	420	10.0	11		MB	10
3476	MAMALA	23OCT79	PARA	16	613300	2354210	180	390	420	10.0	11		MB	10
3477	MAMALA	23OCT79	HAPL	9	613300	2354210	180	390	420	10.0	11		MB	10
3478	MAMALA	23OCT79	URBR	9	613300	2354210	180	390	420	10.0	11		MB	10
3479	MAMALA	23OCT79	ORBI	6	613300	2354210	180	390	420	10.0	11		MB	10
3480	MAMALA	23OCT79	CALC	3	613300	2354210	180	390	420	10.0	11		MB	10
3481	MAMALA	23OCT79	PLES	2	613300	2354210	180	390	420	10.0	11		MB	10
3482	MAMALA	23OCT79	CEBT	1	613300	2354210	180	390	420	10.0	11		MB	10
3483	MAMALA	23OCT79	PERP	63	613300	2354210	180	390	420	10.0	11		MB	10
3484	MAMALA	23OCT79	DIPL	8	613300	2354210	180	390	420	10.0	11		MB	10
3485	MAMALA	23OCT79	DIAL	20	613300	2354210	180	390	420	10.0	11		MB	10
3486	MAMALA	23OCT79	SCOP	2	613300	2354210	180	390	420	10.0	11		MB	10
3487	MAMALA	23OCT79	FULV	1	613300	2354210	180	390	420	10.0	11		MB	10
3488	MAMALA	23OCT79	ALAB	1	613300	2354210	180	390	420	10.0	11		MB	10
3489	MAMALA	23OCT79	SCAL	5	613300	2354210	180	390	420	10.0	11		MB	10
3490	MAMALA	23OCT79	TRIP	7	613300	2354210	180	390	420	10.0	11		MB	10
3491	MAMALA	23OCT79	BALC	5	613300	2354210	180	390	420	10.0	11		MB	10
3492	MAMALA	23OCT79	KUGU	2	613300	2354210	180	390	420	10.0	11		MB	10
3493	MAMALA	23OCT79	ACTE	4	613300	2354210	180	390	420	10.0	11		MB	10
3494	MAMALA	23OCT79	PYHA	4	613300	2354210	180	390	420	10.0	11		MB	10
3495	MAMALA	23OCT79	ODDS	2	613300	2354210	180	390	420	10.0	11		MB	10
3496	MAMALA	23OCT79	ATYS	2	613300	2354210	180	390	420	10.0	11		MB	10
3497	MAMALA	23OCT79	RUCH	2	613300	2354210	180	390	420	10.0	11		MB	10
3498	MAMALA	23OCT79	BRYA	2	613300	2354210	180	390	420	10.0	11		MB	10
3499	MAMALA	23OCT79	TELL	1	613300	2354210	180	390	420	10.0	11		MB	10
3500	MAMALA	23OCT79	BISC	8	613300	2354210	180	390	420	10.0	11		MB	10
3501	MAMALA	23OCT79	COND	1	613300	2354210	180	390	420	10.0	11		MB	10
3502	MAMALA	23OCT79	FOSS	1	613500	2353700	260	360	290	4.1	31		M9	25
3503	MAMALA	23OCT79	RISD	2	613500	2353700	260	360	290	4.1	31		M9	25
3504	MAMALA	23OCT79	RHON	1	613500	2353700	260	360	290	4.1	31		M9	25
3505	MAMALA	23OCT79	CITH	8	613500	2353700	260	360	290	4.1	31		M9	25
3506	MAMALA	23OCT79	PARA	14	613500	2353700	260	360	290	4.1	31		M9	25
3507	MAMALA	23OCT79	HAPL	4	613500	2353700	260	360	290	4.1	31		M9	25
3508	MAMALA	23OCT79	PERP	48	613500	2353700	260	360	290	4.1	31		M9	25
3509	MAMALA	23OCT79	DIAL	31	613500	2353700	260	360	290	4.1	31		M9	25
3510	MAMALA	23OCT79	SCOP	26	613500	2353700	260	360	290	4.1	31		M9	25
3511	MAMALA	23OCT79	FULV	57	613500	2353700	260	360	290	4.1	31		M9	25
3512	MAMALA	23OCT79	SCAL	19	613500	2353700	260	360	290	4.1	31		M9	25
3513	MAMALA	23OCT79	EPIT	4	613500	2353700	260	360	290	4.1	31		M9	25
3514	MAMALA	23OCT79	BALC	40	613500	2353700	260	360	290	4.1	31		M9	25
3515	MAMALA	23OCT79	NATI	3	613500	2353700	260	360	290	4.1	31		M9	25
3516	MAMALA	23OCT79	IURR	1	613500	2353700	260	360	290	4.1	31		M9	25
3517	MAMALA	23OCT79	ACTE	23	613500	2353700	260	360	290	4.1	31		M9	25
3518	MAMALA	23OCT79	PYHA	2	613500	2353700	260	360	290	4.1	31		M9	25
3519	MAMALA	23OCT79	ODDS	3	613500	2353700	260	360	290	4.1	31		M9	25
3520	MAMALA	23OCT79	HELL	2	613500	2353700	260	360	290	4.1	31		M9	25
3521	MAMALA	23OCT79	UEND	3	613500	2353700	260	360	290	4.1	31		M9	25
3522	MAMALA	23OCT79	OPAT	1	613500	2353700	260	360	290	4.1	31		M9	25
3523	MAMALA	23OCT79	USTR	1	613500	2353700	260	360	290	4.1	31		M9	25
3524	MAMALA	23OCT79	TELL	1	613500	2353700	260	360	290	4.1	31		M9	25
3525	MAMALA	23OCT79	BISC	14	613500	2353700	260	360	290	4.1	31		M9	25
3526	MAMALA	23OCT79	OIND	3	613500	2353700	260	360	290	4.1	31		M9	25
3527	MAMALA	01MAR81	EMSC	1	618600	2353350	198	1	M1	10
3528	MAMALA	01MAR81	ALCY	2	618600	2353350	198	1	M1	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOURD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
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3529	MAMALA	01MAR81	FUSS	2	618600	2353350	198	1	M1	10
3530	MAMALA	01MAR81	LEPT	6	618600	2353350	198	1	M1	10
3531	MAMALA	01MAR81	TRIC	195	618600	2353350	198	.	.	.	.	.	1	M1	10
3532	MAMALA	01MAR81	SMAR	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3533	MAMALA	01MAR81	RISO	5	618600	2353350	198	.	.	.	.	.	1	M1	10
3534	MAMALA	01MAR81	RML	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3535	MAMALA	01MAR81	REPH	8	618600	2353350	198	.	.	.	.	.	1	M1	10
3536	MAMALA	01MAR81	HTRI	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3537	MAMALA	01MAR81	CITH	123	618600	2353350	198	.	.	.	.	.	1	M1	10
3538	MAMALA	01MAR81	BRUD	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3539	MAMALA	01MAR81	HAPL	20	618600	2353350	198	.	.	.	.	.	1	M1	10
3540	MAMALA	01MAR81	URRH	44	618600	2353350	198	.	.	.	.	.	1	M1	10
3541	MAMALA	01MAR81	ORRI	7	618600	2353350	198	.	.	.	.	.	1	M1	10
3542	MAMALA	01MAR81	CAEC	8	618600	2353350	198	.	.	.	.	.	1	M1	10
3543	MAMALA	01MAR81	BITH	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3544	MAMALA	01MAR81	BITP	7	618600	2353350	198	.	.	.	.	.	1	M1	10
3545	MAMALA	01MAR81	CERT	2	618600	2353350	198	.	.	.	.	.	1	M1	10
3546	MAMALA	01MAR81	PERP	69	618600	2353350	198	.	.	.	.	.	1	M1	10
3547	MAMALA	01MAR81	DIPL	24	618600	2353350	198	.	.	.	.	.	1	M1	10
3548	MAMALA	01MAR81	DIAL	15	618600	2353350	198	.	.	.	.	.	1	M1	10
3549	MAMALA	01MAR81	FULV	2	618600	2353350	198	.	.	.	.	.	1	M1	10
3550	MAMALA	01MAR81	ALAB	3	618600	2353350	198	.	.	.	.	.	1	M1	10
3551	MAMALA	01MAR81	SCAL	10	618600	2353350	198	.	.	.	.	.	1	M1	10
3552	MAMALA	01MAR81	TRIP	23	618600	2353350	198	.	.	.	.	.	1	M1	10
3553	MAMALA	01MAR81	BALC	4	618600	2353350	198	.	.	.	.	.	1	M1	10
3554	MAMALA	01MAR81	HIPP	3	618600	2353350	198	.	.	.	.	.	1	M1	10
3555	MAMALA	01MAR81	NATI	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3556	MAMALA	01MAR81	OTHE	5	618600	2353350	198	.	.	.	.	.	1	M1	10
3557	MAMALA	01MAR81	KUGU	6	618600	2353350	198	.	.	.	.	.	1	M1	10
3558	MAMALA	01MAR81	SMIT	5	618600	2353350	198	.	.	.	.	.	1	M1	10
3559	MAMALA	01MAR81	TURR	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3560	MAMALA	01MAR81	OTND	4	618600	2353350	198	.	.	.	.	.	1	M1	10
3561	MAMALA	01MAR81	ACTE	2	618600	2353350	198	.	.	.	.	.	1	M1	10
3562	MAMALA	01MAR81	WILL	4	618600	2353350	198	.	.	.	.	.	1	M1	10
3563	MAMALA	01MAR81	BOTH	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3564	MAMALA	01MAR81	BARB	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3565	MAMALA	01MAR81	TELL	3	618600	2353350	198	.	.	.	.	.	1	M1	10
3566	MAMALA	01MAR81	HEMI	3	618600	2353350	198	.	.	.	.	.	1	M1	10
3567	MAMALA	01MAR81	PYNA	1	618600	2353350	198	.	.	.	.	.	1	M1	10
3568	MAMALA	01MAR81	PAKA	26	618600	2353350	198	.	.	.	.	.	1	M1	10
3569	MAMALA	01MAR81	TRIC	1	612220	2354150	216	.	.	.	.	.	1	M10	10
3570	MAMALA	01MAR81	RISO	25	612220	2354150	216	.	.	.	.	.	1	M10	10
3571	MAMALA	01MAR81	PARA	12	612220	2354150	216	.	.	.	.	.	1	M10	10
3572	MAMALA	01MAR81	POWL	14	612220	2354150	216	.	.	.	.	.	1	M10	10
3573	MAMALA	01MAR81	ORBR	5	612220	2354150	216	.	.	.	.	.	1	M10	10
3574	MAMALA	01MAR81	CAEC	3	612220	2354150	216	.	.	.	.	.	1	M10	10
3575	MAMALA	01MAR81	PERP	43	612220	2354150	216	.	.	.	.	.	1	M10	10
3576	MAMALA	01MAR81	DIAL	33	612220	2354150	216	.	.	.	.	.	1	M10	10
3577	MAMALA	01MAR81	SCOP	70	612220	2354150	216	.	.	.	.	.	1	M10	10
3578	MAMALA	01MAR81	FULV	43	612220	2354150	216	.	.	.	.	.	1	M10	10
3579	MAMALA	01MAR81	SCAL	20	612220	2354150	216	.	.	.	.	.	1	M10	10
3580	MAMALA	01MAR81	CERI	1	612220	2354150	216	.	.	.	.	.	1	M10	10
3581	MAMALA	01MAR81	TRIP	1	612220	2354150	216	.	.	.	.	.	1	M10	10
3582	MAMALA	01MAR81	EPIT	4	612220	2354150	216	.	.	.	.	.	1	M10	10
3583	MAMALA	01MAR81	BALC	34	612220	2354150	216	1	M10	10
3584	MAMALA	01MAR81	NATI	3	612220	2354150	216	1	M10	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3585	MAMALA	01MAR81	OTHE	1	612220	2354150	216	.	.	.	.	1	M10	10
3586	MAMALA	01MAR81	KUGU	4	612220	2354150	216	.	.	.	.	1	M10	10
3587	MAMALA	01MAR81	MITR	1	612220	2354150	216	.	.	.	.	1	M10	10
3588	MAMALA	01MAR81	UDUS	10	612220	2354150	216	.	.	.	.	1	M10	10
3589	MAMALA	01MAR81	ACTE	12	612220	2354150	216	.	.	.	.	1	M10	10
3590	MAMALA	01MAR81	ATYS	2	612220	2354150	216	.	.	.	.	1	M10	10

3653	MAMALA	01MAR81	PYNA	3	616210	2353950	270	.	.	.	.	.	1	M17	10
3654	MAMALA	01MAR81	ALCY	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3655	MAMALA	01MAR81	LEPT	6	618220	2353750	120	.	.	.	.	.	1	M18	25
3656	MAMALA	01MAR81	TRIC	35	618220	2353750	120	.	.	.	.	.	1	M18	25
3657	MAMALA	01MAR81	RISO	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3658	MAMALA	01MAR81	KEPH	19	618220	2353750	120	.	.	.	.	.	1	M18	25
3659	MAMALA	01MAR81	RHON	30	618220	2353750	120	.	.	.	.	.	1	M18	25
3660	MAMALA	01MAR81	CITH	118	618220	2353750	120	.	.	.	.	.	1	M18	25
3661	MAMALA	01MAR81	PARA	67	618220	2353750	120	.	.	.	.	.	1	M18	25
3662	MAMALA	01MAR81	POWL	2	618220	2353750	120	.	.	.	.	.	1	M18	25
3663	MAMALA	01MAR81	ORBR	2	618220	2353750	120	.	.	.	.	.	1	M18	25
3664	MAMALA	01MAR81	CALC	15	618220	2353750	120	.	.	.	.	.	1	M18	25
3665	MAMALA	01MAR81	PERP	536	618220	2353750	120	.	.	.	.	.	1	M18	25
3666	MAMALA	01MAR81	DIAL	320	618220	2353750	120	.	.	.	.	.	1	M18	25
3667	MAMALA	01MAR81	SCUP	7	618220	2353750	120	.	.	.	.	.	1	M18	25
3668	MAMALA	01MAR81	FULV	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3669	MAMALA	01MAR81	SCAL	70	618220	2353750	120	.	.	.	.	.	1	M18	25
3670	MAMALA	01MAR81	CERI	4	618220	2353750	120	.	.	.	.	.	1	M18	25
3671	MAMALA	01MAR81	TRIP	44	618220	2353750	120	.	.	.	.	.	1	M18	25
3672	MAMALA	01MAR81	EPIT	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3673	MAMALA	01MAR81	BALC	41	618220	2353750	120	.	.	.	.	.	1	M18	25
3674	MAMALA	01MAR81	NATI	7	618220	2353750	120	.	.	.	.	.	1	M18	25
3675	MAMALA	01MAR81	UTHE	3	618220	2353750	120	.	.	.	.	.	1	M18	25
3676	MAMALA	01MAR81	KUGU	10	618220	2353750	120	.	.	.	.	.	1	M18	25
3677	MAMALA	01MAR81	MITB	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3678	MAMALA	01MAR81	TURK	3	618220	2353750	120	.	.	.	.	.	1	M18	25
3679	MAMALA	01MAR81	ODDS	4	618220	2353750	120	.	.	.	.	.	1	M18	25
3680	MAMALA	01MAR81	JULI	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3681	MAMALA	01MAR81	BOTH	3	618220	2353750	120	.	.	.	.	.	1	M18	25
3682	MAMALA	01MAR81	CHLA	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3683	MAMALA	01MAR81	ROCH	12	618220	2353750	120	.	.	.	.	.	1	M18	25
3684	MAMALA	01MAR81	BRYA	3	618220	2353750	120	.	.	.	.	.	1	M18	25
3685	MAMALA	01MAR81	KANE	3	618220	2353750	120	.	.	.	.	.	1	M18	25
3686	MAMALA	01MAR81	LIMO	2	618220	2353750	120	.	.	.	.	.	1	M18	25
3687	MAMALA	01MAR81	ODDS	5	618220	2353750	120	.	.	.	.	.	1	M18	25
3688	MAMALA	01MAR81	CTEN	1	618220	2353750	120	.	.	.	.	.	1	M18	25
3689	MAMALA	01MAR81	EMSC	2	617650	2353500	360	.	.	.	.	.	1	M19	10
3690	MAMALA	01MAR81	RISO	1	617650	2353500	360	.	.	.	.	.	1	M19	10
3691	MAMALA	01MAR81	SMAR	1	617650	2353500	360	.	.	.	.	.	1	M19	10
3692	MAMALA	01MAR81	KEPH	3	617650	2353500	360	.	.	.	.	.	1	M19	10
3693	MAMALA	01MAR81	RHON	12	617650	2353500	360	.	.	.	.	.	1	M19	10
3694	MAMALA	01MAR81	CITH	8	617650	2353500	360	.	.	.	.	.	1	M19	10
3695	MAMALA	01MAR81	PARA	1	617650	2353500	360	1	M19	10
3696	MAMALA	01MAR81	POWL	50	617650	2353500	360	1	M19	10

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OBS	LOCATION	DATE	SPECIES	ABUND	COORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3697	MAMALA	01MAR81	ORBR	1	617650	2353500	360	.	.	.	.	1	M19	10
3698	MAMALA	01MAR81	CAEC	3	617650	2353500	360	.	.	.	.	1	M19	10
3699	MAMALA	01MAR81	CERT	11	617650	2353500	360	.	.	.	.	1	M19	10
3700	MAMALA	01MAR81	PERP	29	617650	2353500	360	.	.	.	.	1	M19	10
3701	MAMALA	01MAR81	DIAL	3	617650	2353500	360	.	.	.	.	1	M19	10
3702	MAMALA	01MAR81	SCUP	240	617650	2353500	360	.	.	.	.	1	M19	10
3703	MAMALA	01MAR81	FULV	9	617650	2353500	360	.	.	.	.	1	M19	10
3704	MAMALA	01MAR81	SCAL	11	617650	2353500	360	.	.	.	.	1	M19	10
3705	MAMALA	01MAR81	CERI	2	617650	2353500	360	.	.	.	.	1	M19	10
3706	MAMALA	01MAR81	TRIP	6	617650	2353500	360	.	.	.	.	1	M19	10
3707	MAMALA	01MAR81	EPIT	3	617650	2353500	360	.	.	.	.	1	M19	10
3708	MAMALA	01MAR81	BALC	61	617650	2353500	360	.	.	.	.	1	M19	10
3709	MAMALA	01MAR81	NATI	3	617650	2353500	360	.	.	.	.	1	M19	10
3710	MAMALA	01MAR81	KUGU	2	617650	2353500	360	.	.	.	.	1	M19	10
3711	MAMALA	01MAR81	SMIT	1	617650	2353500	360	.	.	.	.	1	M19	10
3712	MAMALA	01MAR81	CARI	1	617650	2353500	360	.	.	.	.	1	M19	10
3713	MAMALA	01MAR81	TURK	4	617650	2353500	360	.	.	.	.	1	M19	10
3714	MAMALA	01MAR81	MITR	2	617650	2353500	360	.	.	.	.	1	M19	10

3777	MAMALA	01MAR81	RISU	2	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3778	MAMALA	01MAR81	CITH	7	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3779	MAMALA	01MAR81	BROU	2	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3780	MAMALA	01MAR81	PARA	10	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3781	MAMALA	01MAR81	HAPL	1	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3782	MAMALA	01MAR81	CAEC	1	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3783	MAMALA	01MAR81	PERP	51	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3784	MAMALA	01MAR81	DIAL	9	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3785	MAMALA	01MAR81	SCOP	73	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3786	MAMALA	01MAR81	FULV	43	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3787	MAMALA	01MAR81	SCAL	11	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3788	MAMALA	01MAR81	TRIP	2	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3789	MAMALA	01MAR81	EPIT	9	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3790	MAMALA	01MAR81	BALC	63	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3791	MAMALA	01MAR81	NATI	7	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3792	MAMALA	01MAR81	OTHE	1	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3793	MAMALA	01MAR81	KUGO	4	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3794	MAMALA	01MAR81	TUNR	5	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3795	MAMALA	01MAR81	DIND	2	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3796	MAMALA	01MAR81	OPAT	4	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3797	MAMALA	01MAR81	ACTE	20	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3798	MAMALA	01MAR81	ATYS	1	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3799	MAMALA	01MAR81	BUTH	2	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3800	MAMALA	01MAR81	CHLA	5	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3801	MAMALA	01MAR81	ROCH	1	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3802	MAMALA	01MAR81	USTR	3	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3803	MAMALA	01MAR81	TELL	31	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3804	MAMALA	01MAR81	CTEN	2	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3805	MAMALA	01MAR81	PYRA	4	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3806	MAMALA	01MAR81	PUPA	3	613300	2354210	180	.	.	.	.	.	.	1	MB	10
3807	MAMALA	01MAR81	EMSC	1	613500	2353700	360	1	MY	10
3808	MAMALA	01MAR81	TRIC	2	613500	2353700	360	1	MY	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL	
3809	MAMALA	01MAR81	RISU	4	613500	2353700	360	.	.	.	.	.	1	MY	10
3810	MAMALA	01MAR81	RHON	1	613500	2353700	360	.	.	.	.	.	1	MY	10
3811	MAMALA	01MAR81	CITH	1	613500	2353700	360	.	.	.	.	.	1	MY	10
3812	MAMALA	01MAR81	PARA	9	613500	2353700	360	.	.	.	.	.	1	MY	10
3813	MAMALA	01MAR81	PDWL	14	613500	2353700	360	.	.	.	.	.	1	MY	10
3814	MAMALA	01MAR81	URBR	2	613500	2353700	360	.	.	.	.	.	1	MY	10
3815	MAMALA	01MAR81	PERP	27	613500	2353700	360	.	.	.	.	.	1	MY	10
3816	MAMALA	01MAR81	DIAL	4	613500	2353700	360	.	.	.	.	.	1	MY	10
3817	MAMALA	01MAR81	SCOP	97	613500	2353700	360	.	.	.	.	.	1	MY	10
3818	MAMALA	01MAR81	FULV	8	613500	2353700	360	.	.	.	.	.	1	MY	10
3819	MAMALA	01MAR81	SCAL	46	613500	2353700	360	.	.	.	.	.	1	MY	10
3820	MAMALA	01MAR81	EPII	2	613500	2353700	360	.	.	.	.	.	1	MY	10
3821	MAMALA	01MAR81	BALC	70	613500	2353700	360	.	.	.	.	.	1	MY	10
3822	MAMALA	01MAR81	UDUS	2	613500	2353700	360	.	.	.	.	.	1	MY	10
3823	MAMALA	01MAR81	ACTE	8	613500	2353700	360	.	.	.	.	.	1	MY	10
3824	MAMALA	01MAR81	ATYS	2	613500	2353700	360	.	.	.	.	.	1	MY	10
3825	MAMALA	01MAR81	TELL	5	613500	2353700	360	.	.	.	.	.	1	MY	10
3826	MAMALA	01MAR81	COND	2	613500	2353700	360	.	.	.	.	.	1	MY	10
3827	MAMALA	01MAR81	PYRA	1	613500	2353700	360	.	.	.	.	.	1	MY	10
3828	MAMALA	01MAR81	PUPA	1	613500	2353700	360	.	.	.	.	.	1	MY	10
3829	MAMALA	01MAR81	EMSC	2	618600	2353350	180	.	.	.	.	.	2	M1	25
3830	MAMALA	01MAR81	ALCY	3	618600	2353350	180	.	.	.	.	.	2	M1	25
3831	MAMALA	01MAR81	FOSS	2	618600	2353350	180	.	.	.	.	.	2	M1	25
3832	MAMALA	01MAR81	LEPT	3	618600	2353350	180	.	.	.	.	.	2	M1	25
3833	MAMALA	01MAR81	TRIC	100	618600	2353350	180	.	.	.	.	.	2	M1	25
3834	MAMALA	01MAR81	SMAR	1	618600	2353350	180	.	.	.	.	.	2	M1	25
3835	MAMALA	01MAR81	MERL	3	618600	2353350	180	.	.	.	.	.	2	M1	25
3836	MAMALA	01MAR81	RISU	4	618600	2353350	180	.	.	.	.	.	2	M1	25
3837	MAMALA	01MAR81	RAMB	1	618600	2353350	180	.	.	.	.	.	2	M1	25
3838	MAMALA	01MAR81	NEPH	4	618600	2353350	180	.	.	.	.	.	2	M1	25

3839	MAMALA	01MAR81	CITH	74	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3840	MAMALA	01MAR81	HAPL	3	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3841	MAMALA	01MAR81	ORBR	18	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3842	MAMALA	01MAR81	CAEC	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3843	MAMALA	01MAR81	BITP	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3844	MAMALA	01MAR81	BITZ	1	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3845	MAMALA	01MAR81	PERP	13	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3846	MAMALA	01MAR81	OIPL	8	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3847	MAMALA	01MAR81	DIAL	4	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3848	MAMALA	01MAR81	FULV	1	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3849	MAMALA	01MAR81	ALAB	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3850	MAMALA	01MAR81	SCAL	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3851	MAMALA	01MAR81	CERI	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3852	MAMALA	01MAR81	TRIP	7	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3853	MAMALA	01MAR81	HIPP	9	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3854	MAMALA	01MAR81	NATI	1	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3855	MAMALA	01MAR81	OTHE	7	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3856	MAMALA	01MAR81	KOGU	5	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3857	MAMALA	01MAR81	OIND	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3858	MAMALA	01MAR81	ATYS	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3859	MAMALA	01MAR81	WILL	1	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3860	MAMALA	01MAR81	BARB	1	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3861	MAMALA	01MAR81	ROCH	2	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3862	MAMALA	01MAR81	BRYA	1	618600	2353350	186	.	.	.	.	.	.	.	.	.	.	M1	25
3863	MAMALA	01MAR81	HEMI	2	618600	2353350	186	M1	25
3864	MAMALA	01MAR81	PARA	12	618600	2353350	186	M1	25

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DBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3865	MAMALA	01MAR81	RISO	3	612100	2354650	180	.	.	.	.	.	M13	10
3866	MAMALA	01MAR81	CITH	2	612100	2354650	180	.	.	.	.	.	M13	10
3867	MAMALA	01MAR81	PARA	1	612100	2354650	180	.	.	.	.	.	M13	10
3868	MAMALA	01MAR81	HAPL	1	612100	2354650	180	.	.	.	.	.	M13	10
3869	MAMALA	01MAR81	PERP	2	612100	2354650	180	.	.	.	.	.	M13	10
3870	MAMALA	01MAR81	DIAL	1	612100	2354650	180	.	.	.	.	.	M13	10
3871	MAMALA	01MAR81	SCOP	9	612100	2354650	180	.	.	.	.	.	M13	10
3872	MAMALA	01MAR81	FULV	92	612100	2354650	180	.	.	.	.	.	M13	10
3873	MAMALA	01MAR81	SCAL	2	612100	2354650	180	.	.	.	.	.	M13	10
3874	MAMALA	01MAR81	EPIT	1	612100	2354650	180	.	.	.	.	.	M13	10
3875	MAMALA	01MAR81	BALC	42	612100	2354650	180	.	.	.	.	.	M13	10
3876	MAMALA	01MAR81	NATI	5	612100	2354650	180	.	.	.	.	.	M13	10
3877	MAMALA	01MAR81	OTHE	3	612100	2354650	180	.	.	.	.	.	M13	10
3878	MAMALA	01MAR81	KOGU	10	612100	2354650	180	.	.	.	.	.	M13	10
3879	MAMALA	01MAR81	MIIM	1	612100	2354650	180	.	.	.	.	.	M13	10
3880	MAMALA	01MAR81	TURK	3	612100	2354650	180	.	.	.	.	.	M13	10
3881	MAMALA	01MAR81	DIND	2	612100	2354650	180	.	.	.	.	.	M13	10
3882	MAMALA	01MAR81	DDUS	4	612100	2354650	180	.	.	.	.	.	M13	10
3883	MAMALA	01MAR81	ACTE	16	612100	2354650	180	.	.	.	.	.	M13	10
3884	MAMALA	01MAR81	ATYS	2	612100	2354650	180	.	.	.	.	.	M13	10
3885	MAMALA	01MAR81	TELL	6	612100	2354650	180	.	.	.	.	.	M13	10
3886	MAMALA	01MAR81	PYRA	10	612100	2354650	180	.	.	.	.	.	M13	10
3887	MAMALA	01MAR81	PUPA	7	612100	2354650	180	.	.	.	.	.	M17	10
3888	MAMALA	01MAR81	THIC	6	616210	2353950	270	.	.	.	.	.	M17	10
3889	MAMALA	01MAR81	RISO	8	616210	2353950	270	.	.	.	.	.	M17	10
3890	MAMALA	01MAR81	CITH	4	616210	2353950	270	.	.	.	.	.	M17	10
3891	MAMALA	01MAR81	PARA	6	616210	2353950	270	.	.	.	.	.	M17	10
3892	MAMALA	01MAR81	POWL	7	616210	2353950	270	.	.	.	.	.	M17	10
3893	MAMALA	01MAR81	ORBR	3	616210	2353950	270	.	.	.	.	.	M17	10
3894	MAMALA	01MAR81	PERP	20	616210	2353950	270	.	.	.	.	.	M17	10
3895	MAMALA	01MAR81	SCOP	63	616210	2353950	270	.	.	.	.	.	M17	10
3896	MAMALA	01MAR81	FULV	47	616210	2353950	270	.	.	.	.	.	M17	10
3897	MAMALA	01MAR81	SCAL	16	616210	2353950	270	.	.	.	.	.	M17	10
3898	MAMALA	01MAR81	HELL	1	616210	2353950	270	.	.	.	.	.	M17	10
3899	MAMALA	01MAR81	EPIT	2	616210	2353950	270	.	.	.	.	.	M17	10
3900	MAMALA	01MAR81	HALC	5	616210	2353950	270	.	.	.	.	.	M17	10

3901	MAMALA	01MAR81	HIPP	1	616210	2353950	270	.	.	.	.	.	.	M17	10
3902	MAMALA	01MAR81	OTHE	1	616210	2353950	270	.	.	.	.	.	.	M17	10
3903	MAMALA	01MAR81	KOGO	2	616210	2353950	270	.	.	.	.	.	.	M17	10
3904	MAMALA	01MAR81	TURR	1	616210	2353950	270	.	.	.	.	.	.	M17	10
3905	MAMALA	01MAR81	ODDS	12	616210	2353950	270	.	.	.	.	.	.	M17	10
3906	MAMALA	01MAR81	ACTE	21	616210	2353950	270	.	.	.	.	.	.	M17	10
3907	MAMALA	01MAR81	ATYS	1	616210	2353950	270	.	.	.	.	.	.	M17	10
3908	MAMALA	01MAR81	BOTH	7	616210	2353950	270	.	.	.	.	.	.	M17	10
3909	MAMALA	01MAR81	BARB	2	616210	2353950	270	.	.	.	.	.	.	M17	10
3910	MAMALA	01MAR81	CHLA	1	616210	2353950	270	.	.	.	.	.	.	M17	10
3911	MAMALA	01MAR81	CTEN	1	616210	2353950	270	.	.	.	.	.	.	M17	10
3912	MAMALA	01MAR81	EMSC	1	617650	2353500	300	.	.	.	.	.	.	M19	10
3913	MAMALA	01MAR81	CITH	1	617650	2353500	300	.	.	.	.	.	.	M19	10
3914	MAMALA	01MAR81	PARA	5	617650	2353500	300	.	.	.	.	.	.	M19	10
3915	MAMALA	01MAR81	POWL	18	617650	2353500	300	.	.	.	.	.	.	M19	10
3916	MAMALA	01MAR81	ORBR	1	617650	2353500	300	.	.	.	.	.	.	M19	10
3917	MAMALA	01MAR81	CAEC	3	617650	2353500	300	.	.	.	.	.	.	M19	10
3918	MAMALA	01MAR81	PERP	18	617650	2353500	300	.	.	.	.	.	.	M19	10
3919	MAMALA	01MAR81	DIPL	1	617650	2353500	300	M19	10
3920	MAMALA	01MAR81	DIAL	1	617650	2353500	300	M19	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
3921	MAMALA	01MAR81	SCDP	166	617650	2353500	300	.	.	.	.	.	M19	10
3922	MAMALA	01MAR81	FULV	11	617650	2353500	300	.	.	.	.	.	M19	10
3923	MAMALA	01MAR81	SCAL	16	617650	2353500	300	.	.	.	.	.	M19	10
3924	MAMALA	01MAR81	TRIP	6	617650	2353500	300	.	.	.	.	.	M19	10
3925	MAMALA	01MAR81	EPIT	1	617650	2353500	300	.	.	.	.	.	M19	10
3926	MAMALA	01MAR81	BALC	58	617650	2353500	300	.	.	.	.	.	M19	10
3927	MAMALA	01MAR81	NATI	1	617650	2353500	300	.	.	.	.	.	M19	10
3928	MAMALA	01MAR81	OTHE	1	617650	2353500	300	.	.	.	.	.	M19	10
3929	MAMALA	01MAR81	KOGO	4	617650	2353500	300	.	.	.	.	.	M19	10
3930	MAMALA	01MAR81	TURR	4	617650	2353500	300	.	.	.	.	.	M19	10
3931	MAMALA	01MAR81	OIND	1	617650	2353500	300	.	.	.	.	.	M19	10
3932	MAMALA	01MAR81	ODDS	4	617650	2353500	300	.	.	.	.	.	M19	10
3933	MAMALA	01MAR81	ACTE	16	617650	2353500	300	.	.	.	.	.	M19	10
3934	MAMALA	01MAR81	ATYS	5	617650	2353500	300	.	.	.	.	.	M19	10
3935	MAMALA	01MAR81	KANE	1	617650	2353500	300	.	.	.	.	.	M19	10
3936	MAMALA	01MAR81	TELL	6	617650	2353500	300	.	.	.	.	.	M19	10
3937	MAMALA	01MAR81	PYRA	2	617650	2353500	300	.	.	.	.	.	M19	10
3938	MAMALA	01MAR81	PUPA	1	614500	2354300	204	.	.	.	.	.	M6	10
3939	MAMALA	01MAR81	TRIC	1	614500	2354300	204	.	.	.	.	.	M6	10
3940	MAMALA	01MAR81	RISO	2	614500	2354300	204	.	.	.	.	.	M6	10
3941	MAMALA	01MAR81	RHON	1	614500	2354300	204	.	.	.	.	.	M6	10
3942	MAMALA	01MAR81	CITH	7	614500	2354300	204	.	.	.	.	.	M6	10
3943	MAMALA	01MAR81	HAPL	2	614500	2354300	204	.	.	.	.	.	M6	10
3944	MAMALA	01MAR81	CAEC	5	614500	2354300	204	.	.	.	.	.	M6	10
3945	MAMALA	01MAR81	CERT	2	614500	2354300	204	.	.	.	.	.	M6	10
3946	MAMALA	01MAR81	PERP	40	614500	2354300	204	.	.	.	.	.	M6	10
3947	MAMALA	01MAR81	DIAL	14	614500	2354300	204	.	.	.	.	.	M6	10
3948	MAMALA	01MAR81	SCDP	58	614500	2354300	204	.	.	.	.	.	M6	10
3949	MAMALA	01MAR81	FULV	47	614500	2354300	204	.	.	.	.	.	M6	10
3950	MAMALA	01MAR81	SCAL	21	614500	2354300	204	.	.	.	.	.	M6	10
3951	MAMALA	01MAR81	TRIP	3	614500	2354300	204	.	.	.	.	.	M6	10
3952	MAMALA	01MAR81	HELI	1	614500	2354300	204	.	.	.	.	.	M6	10
3953	MAMALA	01MAR81	EPIT	2	614500	2354300	204	.	.	.	.	.	M6	10
3954	MAMALA	01MAR81	BALC	27	614500	2354300	204	.	.	.	.	.	M6	10
3955	MAMALA	01MAR81	NATI	1	614500	2354300	204	.	.	.	.	.	M6	10
3956	MAMALA	01MAR81	OTHE	1	614500	2354300	204	.	.	.	.	.	M6	10
3957	MAMALA	01MAR81	KOGO	2	614500	2354300	204	.	.	.	.	.	M6	10
3958	MAMALA	01MAR81	CONE	1	614500	2354300	204	.	.	.	.	.	M6	10
3959	MAMALA	01MAR81	MITR	1	614500	2354300	204	.	.	.	.	.	M6	10
3960	MAMALA	01MAR81	UJUS	6	614500	2354300	204	.	.	.	.	.	M6	10
3961	MAMALA	01MAR81	ACTE	14	614500	2354300	204	.	.	.	.	.	M6	10
3962	MAMALA	01MAR81	CHLA	1	614500	2354300	204	.	.	.	.	.	M6	10

4025	MAMALA	01MAR81	RHUN	4	613500	2353700	324	.	.	.	.	.	.	M9	10
4026	MAMALA	01MAR81	CITH	10	613500	2353700	324	.	.	.	.	.	.	M9	10
4027	MAMALA	01MAR81	PARA	15	613500	2353700	324	.	.	.	.	.	.	M9	10
4028	MAMALA	01MAR81	POWL	17	613500	2353700	324	.	.	.	.	.	.	M9	10
4029	MAMALA	01MAR81	HAPL	3	613500	2353700	324	.	.	.	.	.	.	M9	10
4030	MAMALA	01MAR81	ORBR	4	613500	2353700	324	.	.	.	.	.	.	M9	10
4031	MAMALA	01MAR81	CALC	3	613500	2353700	324	M9	10
4032	MAMALA	01MAR81	PERP	83	613500	2353700	324	M9	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
4033	MAMALA	01MAR81	DIPL	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4034	MAMALA	01MAR81	DIAL	34.0	613500	2353700	324	.	.	.	.	.	M9	10
4035	MAMALA	01MAR81	SCOP	177.0	613500	2353700	324	.	.	.	.	.	M9	10
4036	MAMALA	01MAR81	FULV	5.0	613500	2353700	324	.	.	.	.	.	M9	10
4037	MAMALA	01MAR81	SCAL	93.0	613500	2353700	324	.	.	.	.	.	M9	10
4038	MAMALA	01MAR81	TRIP	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4039	MAMALA	01MAR81	BALC	43.0	613500	2353700	324	.	.	.	.	.	M9	10
4040	MAMALA	01MAR81	KOGD	2.0	613500	2353700	324	.	.	.	.	.	M9	10
4041	MAMALA	01MAR81	ATYS	8.0	613500	2353700	324	.	.	.	.	.	M9	10
4042	MAMALA	01MAR81	WILL	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4043	MAMALA	01MAR81	BRAC	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4044	MAMALA	01MAR81	CHLA	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4045	MAMALA	01MAR81	TELL	2.0	613500	2353700	324	.	.	.	.	.	M9	10
4046	MAMALA	01MAR81	LIMD	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4047	MAMALA	01MAR81	CTEN	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4048	MAMALA	01MAR81	CUND	1.0	613500	2353700	324	.	.	.	.	.	M9	10
4049	MAMALA	10NOV82	EMSC	2.0	.	.	210	.	.	.	.	1	Y1	10
4050	MAMALA	10NOV82	TRIC	1.0	.	.	210	.	.	.	.	1	Y1	10
4051	MAMALA	10NOV82	MERL	1.0	.	.	210	.	.	.	.	1	Y1	10
4052	MAMALA	10NOV82	BRDU	0.1	.	.	210	.	.	.	.	1	Y1	10
4053	MAMALA	10NOV82	RISD	4.0	.	.	210	.	.	.	.	1	Y1	10
4054	MAMALA	10NOV82	KEPH	1.0	.	.	210	.	.	.	.	1	Y1	10
4055	MAMALA	10NOV82	CITH	10.0	.	.	210	.	.	.	.	1	Y1	10
4056	MAMALA	10NOV82	PARA	20.0	.	.	210	.	.	.	.	1	Y1	10
4057	MAMALA	10NOV82	POWL	10.0	.	.	210	.	.	.	.	1	Y1	10
4058	MAMALA	10NOV82	LOPH	9.0	.	.	210	.	.	.	.	1	Y1	10
4059	MAMALA	10NOV82	ORBR	8.0	.	.	210	.	.	.	.	1	Y1	10
4060	MAMALA	10NOV82	ORBI	6.0	.	.	210	.	.	.	.	1	Y1	10
4061	MAMALA	10NOV82	CAEC	5.0	.	.	210	.	.	.	.	1	Y1	10
4062	MAMALA	10NOV82	STRE	1.0	.	.	210	.	.	.	.	1	Y1	10
4063	MAMALA	10NOV82	PERP	130.0	.	.	210	.	.	.	.	1	Y1	10
4064	MAMALA	10NOV82	DIPL	2.0	.	.	210	.	.	.	.	1	Y1	10
4065	MAMALA	10NOV82	DIAL	68.0	.	.	210	.	.	.	.	1	Y1	10
4066	MAMALA	10NOV82	SCOP	120.0	.	.	210	.	.	.	.	1	Y1	10
4067	MAMALA	10NOV82	FULV	24.0	.	.	210	.	.	.	.	1	Y1	10
4068	MAMALA	10NOV82	ALAB	2.0	.	.	210	.	.	.	.	1	Y1	10
4069	MAMALA	10NOV82	SCAL	121.0	.	.	210	.	.	.	.	1	Y1	10
4070	MAMALA	10NOV82	TRIP	8.0	.	.	210	.	.	.	.	1	Y1	10
4071	MAMALA	10NOV82	BALC	34.0	.	.	210	.	.	.	.	1	Y1	10
4072	MAMALA	10NOV82	NATI	1.0	.	.	210	.	.	.	.	1	Y1	10
4073	MAMALA	10NOV82	OTHE	1.0	.	.	210	.	.	.	.	1	Y1	10
4074	MAMALA	10NOV82	KOGD	2.0	.	.	210	.	.	.	.	1	Y1	10
4075	MAMALA	10NOV82	CARI	1.0	.	.	210	.	.	.	.	1	Y1	10
4076	MAMALA	10NOV82	IURR	3.0	.	.	210	.	.	.	.	1	Y1	10
4077	MAMALA	10NOV82	PYRD	3.0	.	.	210	.	.	.	.	1	Y1	10
4078	MAMALA	10NOV82	ODOS	6.0	.	.	210	.	.	.	.	1	Y1	10
4079	MAMALA	10NOV82	ACTE	7.0	.	.	210	.	.	.	.	1	Y1	10
4080	MAMALA	10NOV82	ATYS	3.0	.	.	210	.	.	.	.	1	Y1	10
4081	MAMALA	10NOV82	BRAC	1.0	.	.	210	.	.	.	.	1	Y1	10
4082	MAMALA	10NOV82	OSTR	4.0	.	.	210	.	.	.	.	1	Y1	10
4083	MAMALA	10NOV82	TELL	3.0	.	.	210	.	.	.	.	1	Y1	10
4084	MAMALA	10NOV82	CTEN	1.0	.	.	210	.	.	.	.	1	Y1	10
4085	MAMALA	10NOV82	BUTH	1.0	.	.	210	.	.	.	.	1	Y1	10
4086	MAMALA	10NOV82	TRIC	1.0	.	.	210	.	.	.	.	1	Y2	10

4087	MAMALA	10NOV82	RISD	1.0	:	:	210	:	:	:	:	1	Y2	10
4088	MAMALA	10NOV82	REPH	1.0	:	:	210	:	:	:	:	1	Y2	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VUL
4089	MAMALA	10NOV82	CITH	4	.	.	210	.	.	.	.	1	Y2	10
4090	MAMALA	10NOV82	PARA	9	.	.	210	.	.	.	.	1	Y2	10
4091	MAMALA	10NOV82	LOPH	5	.	.	210	.	.	.	.	1	Y2	10
4092	MAMALA	10NOV82	URBR	2	.	.	210	.	.	.	.	1	Y2	10
4093	MAMALA	10NOV82	URB1	2	.	.	210	.	.	.	.	1	Y2	10
4094	MAMALA	10NOV82	CAEC	1	.	.	210	.	.	.	.	1	Y2	10
4095	MAMALA	10NOV82	STRE	1	.	.	210	.	.	.	.	1	Y2	10
4096	MAMALA	10NOV82	PERP	48	.	.	210	.	.	.	.	1	Y2	10
4097	MAMALA	10NOV82	DIAL	1	.	.	210	.	.	.	.	1	Y2	10
4098	MAMALA	10NOV82	DIAL	28	.	.	210	.	.	.	.	1	Y2	10
4099	MAMALA	10NOV82	SCOP	64	.	.	210	.	.	.	.	1	Y2	10
4100	MAMALA	10NOV82	FULV	6	.	.	210	.	.	.	.	1	Y2	10
4101	MAMALA	10NOV82	ALAB	1	.	.	210	.	.	.	.	1	Y2	10
4102	MAMALA	10NOV82	SCAL	67	.	.	210	.	.	.	.	1	Y2	10
4103	MAMALA	10NOV82	BALC	24	.	.	210	.	.	.	.	1	Y2	10
4104	MAMALA	10NOV82	NAT1	1	.	.	210	.	.	.	.	1	Y2	10
4105	MAMALA	10NOV82	KOGO	1	.	.	210	.	.	.	.	1	Y2	10
4106	MAMALA	10NOV82	TURR	1	.	.	210	.	.	.	.	1	Y2	10
4107	MAMALA	10NOV82	UDOS	1	.	.	210	.	.	.	.	1	Y2	10
4108	MAMALA	10NOV82	ACTE	2	.	.	210	.	.	.	.	1	Y2	10
4109	MAMALA	10NOV82	ATYS	1	.	.	210	.	.	.	.	1	Y2	10
4110	MAMALA	10NOV82	OSTR	2	.	.	210	.	.	.	.	1	Y2	10
4111	MAMALA	10NOV82	COND	1	.	.	210	.	.	.	.	1	Y2	10
4112	MAMALA	10NOV82	ALCY	1	.	.	210	.	.	.	.	1	Y3	55
4113	MAMALA	10NOV82	BROO	1	.	.	210	.	.	.	.	1	Y3	55
4114	MAMALA	10NOV82	REPH	2	.	.	210	.	.	.	.	1	Y3	55
4115	MAMALA	10NOV82	RHON	2	.	.	210	.	.	.	.	1	Y3	55
4116	MAMALA	10NOV82	RTUR	1	.	.	210	.	.	.	.	1	Y3	55
4117	MAMALA	10NOV82	CITH	1	.	.	210	.	.	.	.	1	Y3	55
4118	MAMALA	10NOV82	PARA	4	.	.	210	.	.	.	.	1	Y3	55
4119	MAMALA	10NOV82	POWL	1	.	.	210	.	.	.	.	1	Y3	55
4120	MAMALA	10NOV82	LOPH	1	.	.	210	.	.	.	.	1	Y3	55
4121	MAMALA	10NOV82	ORBR	6	.	.	210	.	.	.	.	1	Y3	55
4122	MAMALA	10NOV82	URB1	1	.	.	210	.	.	.	.	1	Y3	55
4123	MAMALA	10NOV82	CAEC	1	.	.	210	.	.	.	.	1	Y3	55
4124	MAMALA	10NOV82	CERT	1	.	.	210	.	.	.	.	1	Y3	55
4125	MAMALA	10NOV82	PERP	20	.	.	210	.	.	.	.	1	Y3	55
4126	MAMALA	10NOV82	DIAL	25	.	.	210	.	.	.	.	1	Y3	55
4127	MAMALA	10NOV82	SCOP	17	.	.	210	.	.	.	.	1	Y3	55
4128	MAMALA	10NOV82	FULV	3	.	.	210	.	.	.	.	1	Y3	55
4129	MAMALA	10NOV82	SCAL	34	.	.	210	.	.	.	.	1	Y3	55
4130	MAMALA	10NOV82	TRIP	3	.	.	210	.	.	.	.	1	Y3	55
4131	MAMALA	10NOV82	BALC	7	.	.	210	.	.	.	.	1	Y3	55
4132	MAMALA	10NOV82	KOGO	1	.	.	210	.	.	.	.	1	Y3	55
4133	MAMALA	10NOV82	UDOS	2	.	.	210	.	.	.	.	1	Y3	55
4134	MAMALA	10NOV82	ACTE	2	.	.	210	.	.	.	.	1	Y3	55
4135	MAMALA	10NOV82	OSTR	1	.	.	210	.	.	.	.	1	Y3	55
4136	MAMALA	10NOV82	TELL	4	.	.	210	.	.	.	.	1	Y3	55
4137	MAMALA	10NOV82	LIMO	1	.	.	210	.	.	.	.	1	Y3	55
4138	MAMALA	10NOV82	BUTH	2	.	.	210	.	.	.	.	1	Y3	55
4139	MAMALA	10NOV82	BARL	3	.	.	210	.	.	.	.	1	Y4	10
4140	MAMALA	10NOV82	MEHL	3	.	.	210	.	.	.	.	1	Y4	10
4141	MAMALA	10NOV82	RISD	3	.	.	210	.	.	.	.	1	Y4	10
4142	MAMALA	10NOV82	REPH	2	.	.	210	.	.	.	.	1	Y4	10
4143	MAMALA	10NOV82	RHON	4	.	.	210	1	Y4	10
4144	MAMALA	10NOV82	RTUR	1	.	.	210	1	Y4	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	UXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
4145	MAMALA	10NOV82	CITH	5	.	.	210	.	.	.	.	1	Y4	10
4146	MAMALA	10NOV82	PARA	14	.	.	210	.	.	.	.	1	Y4	10
4147	MAMALA	10NOV82	LOPH	4	.	.	210	.	.	.	.	1	Y4	10
4148	MAMALA	10NOV82	URBR	6	.	.	210	.	.	.	.	1	Y4	10
4149	MAMALA	10NOV82	CAEC	1	.	.	210	.	.	.	.	1	Y4	10
4150	MAMALA	10NOV82	PERP	69	.	.	210	.	.	.	.	1	Y4	10
4151	MAMALA	10NOV82	DIAL	44	.	.	210	.	.	.	.	1	Y4	10
4152	MAMALA	10NOV82	SCOP	98	.	.	210	.	.	.	.	1	Y4	10
4153	MAMALA	10NOV82	FULV	3	.	.	210	.	.	.	.	1	Y4	10
4154	MAMALA	10NOV82	SCAL	77	.	.	210	.	.	.	.	1	Y4	10
4155	MAMALA	10NOV82	HELI	1	.	.	210	.	.	.	.	1	Y4	10
4156	MAMALA	10NOV82	EPIT	1	.	.	210	.	.	.	.	1	Y4	10
4157	MAMALA	10NOV82	BALC	22	.	.	210	.	.	.	.	1	Y4	10
4158	MAMALA	10NOV82	TIRE	1	.	.	210	.	.	.	.	1	Y4	10
4159	MAMALA	10NOV82	OIND	5	.	.	210	.	.	.	.	1	Y4	10
4160	MAMALA	10NOV82	DDUS	1	.	.	210	.	.	.	.	1	Y4	10
4161	MAMALA	10NOV82	ACTE	5	.	.	210	.	.	.	.	1	Y4	10
4162	MAMALA	10NOV82	WILL	1	.	.	210	.	.	.	.	1	Y4	10
4163	MAMALA	10NOV82	ROCH	1	.	.	210	.	.	.	.	1	Y4	10
4164	MAMALA	10NOV82	JSTR	3	.	.	210	.	.	.	.	1	Y4	10
4165	MAMALA	10NOV82	TELL	4	.	.	210	.	.	.	.	1	Y4	10
4166	MAMALA	10NOV82	COND	1	.	.	210	.	.	.	.	1	Y4	10
4167	MAMALA	10NOV82	BARL	2	.	.	210	.	.	.	.	1	Y5	10
4168	MAMALA	10NOV82	RMIL	1	.	.	210	.	.	.	.	1	Y5	10
4169	MAMALA	10NOV82	REPH	1	.	.	210	.	.	.	.	1	Y5	10
4170	MAMALA	10NOV82	RHON	4	.	.	210	.	.	.	.	1	Y5	10
4171	MAMALA	10NOV82	CITH	7	.	.	210	.	.	.	.	1	Y5	10
4172	MAMALA	10NOV82	PARA	1	.	.	210	.	.	.	.	1	Y5	10
4173	MAMALA	10NOV82	LOPH	6	.	.	210	.	.	.	.	1	Y5	10
4174	MAMALA	10NOV82	URBR	6	.	.	210	.	.	.	.	1	Y5	10
4175	MAMALA	10NOV82	CAEC	1	.	.	210	.	.	.	.	1	Y5	10
4176	MAMALA	10NOV82	PERP	47	.	.	210	.	.	.	.	1	Y5	10
4177	MAMALA	10NOV82	DIAL	54	.	.	210	.	.	.	.	1	Y5	10
4178	MAMALA	10NOV82	SCOP	81	.	.	210	.	.	.	.	1	Y5	10
4179	MAMALA	10NOV82	FULV	6	.	.	210	.	.	.	.	1	Y5	10
4180	MAMALA	10NOV82	SCAL	46	.	.	210	.	.	.	.	1	Y5	10
4181	MAMALA	10NOV82	BALC	27	.	.	210	.	.	.	.	1	Y5	10
4182	MAMALA	10NOV82	NATI	2	.	.	210	.	.	.	.	1	Y5	10
4183	MAMALA	10NOV82	KOGO	4	.	.	210	.	.	.	.	1	Y5	10
4184	MAMALA	10NOV82	IURR	1	.	.	210	.	.	.	.	1	Y5	10
4185	MAMALA	10NOV82	MITR	1	.	.	210	.	.	.	.	1	Y5	10
4186	MAMALA	10NOV82	PYRD	1	.	.	210	.	.	.	.	1	Y5	10
4187	MAMALA	10NOV82	ODOS	3	.	.	210	.	.	.	.	1	Y5	10
4188	MAMALA	10NOV82	ACTE	3	.	.	210	.	.	.	.	1	Y5	10
4189	MAMALA	10NOV82	BRAC	1	.	.	210	.	.	.	.	1	Y5	10
4190	MAMALA	10NOV82	ROCH	1	.	.	210	.	.	.	.	1	Y5	10
4191	MAMALA	10NOV82	OSTR	1	.	.	210	.	.	.	.	1	Y5	10
4192	MAMALA	10NOV82	BRYA	1	.	.	210	.	.	.	.	1	Y5	10
4193	MAMALA	10NOV82	BARL	2	.	.	210	.	.	.	.	1	Y6	10
4194	MAMALA	10NOV82	RMIL	1	.	.	210	.	.	.	.	1	Y6	10
4195	MAMALA	10NOV82	REPH	2	.	.	210	.	.	.	.	1	Y6	10
4196	MAMALA	10NOV82	RHON	4	.	.	210	.	.	.	.	1	Y6	10
4197	MAMALA	10NOV82	RTUR	1	.	.	210	.	.	.	.	1	Y6	10
4198	MAMALA	10NOV82	CITH	2	.	.	210	.	.	.	.	1	Y6	10
4199	MAMALA	10NOV82	PARA	7	.	.	210	1	Y6	10
4200	MAMALA	10NOV82	URBR	1	.	.	210	1	Y6	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	UXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
4201	MAMALA	10NOV82	CAEC	1	.	.	210	.	.	.	.	1	Y6	10
4202	MAMALA	10NOV82	PERP	19	.	.	210	.	.	.	.	1	Y6	10
4203	MAMALA	10NOV82	DIAL	20	.	.	210	.	.	.	.	1	Y6	10
4204	MAMALA	10NOV82	SCOP	23	.	.	210	.	.	.	.	1	Y6	10

4205	MAMALA	10NOV82	SCAL	13	.	.	210	.	.	.	.	1	Y6	10
4206	MAMALA	10NOV82	TRIP	2	.	.	210	.	.	.	.	1	Y6	10
4207	MAMALA	10NOV82	BALC	8	.	.	210	.	.	.	.	1	Y6	10
4208	MAMALA	10NOV82	NATI	5	.	.	210	.	.	.	.	1	Y6	10
4209	MAMALA	10NOV82	KOGD	1	.	.	210	.	.	.	.	1	Y6	10
4210	MAMALA	10NOV82	TURR	1	.	.	210	.	.	.	.	1	Y6	10
4211	MAMALA	10NOV82	MDRU	1	.	.	210	.	.	.	.	1	Y6	10
4212	MAMALA	10NOV82	UPAT	1	.	.	210	.	.	.	.	1	Y6	10
4213	MAMALA	10NOV82	DDOS	1	.	.	210	.	.	.	.	1	Y6	10
4214	MAMALA	10NOV82	ACTE	1	.	.	210	.	.	.	.	1	Y6	10
4215	MAMALA	10NOV82	ROCH	1	.	.	210	.	.	.	.	1	Y6	10
4216	MAMALA	10NOV82	DSTR	1	.	.	210	.	.	.	.	1	Y6	10
4217	MAMALA	10NOV82	EMSC	2	.	.	210	.	.	.	.	1	Z1	10
4218	MAMALA	10NOV82	LEPT	2	.	.	210	.	.	.	.	1	Z1	10
4219	MAMALA	10NOV82	SYNA	2	.	.	210	.	.	.	.	1	Z1	10
4220	MAMALA	10NOV82	TRIC	18	.	.	210	.	.	.	.	1	Z1	10
4221	MAMALA	10NOV82	BARL	2	.	.	210	.	.	.	.	1	Z1	10
4222	MAMALA	10NOV82	HLRL	2	.	.	210	.	.	.	.	1	Z1	10
4223	MAMALA	10NOV82	RISD	2	.	.	210	.	.	.	.	1	Z1	10
4224	MAMALA	10NOV82	HMIL	7	.	.	210	.	.	.	.	1	Z1	10
4225	MAMALA	10NOV82	REPH	1	.	.	210	.	.	.	.	1	Z1	10
4226	MAMALA	10NOV82	RHUN	6	.	.	210	.	.	.	.	1	Z1	10
4227	MAMALA	10NOV82	RTUR	1	.	.	210	.	.	.	.	1	Z1	10
4228	MAMALA	10NOV82	CITH	33	.	.	210	.	.	.	.	1	Z1	10
4229	MAMALA	10NOV82	PARA	6	.	.	210	.	.	.	.	1	Z1	10
4230	MAMALA	10NOV82	PWUL	5	.	.	210	.	.	.	.	1	Z1	10
4231	MAMALA	10NOV82	LUPH	2	.	.	210	.	.	.	.	1	Z1	10
4232	MAMALA	10NOV82	ORBR	4	.	.	210	.	.	.	.	1	Z1	10
4233	MAMALA	10NOV82	ORBI	9	.	.	210	.	.	.	.	1	Z1	10
4234	MAMALA	10NOV82	CAEC	6	.	.	210	.	.	.	.	1	Z1	10
4235	MAMALA	10NOV82	BITP	2	.	.	210	.	.	.	.	1	Z1	10
4236	MAMALA	10NOV82	BITZ	6	.	.	210	.	.	.	.	1	Z1	10
4237	MAMALA	10NOV82	BITI	1	.	.	210	.	.	.	.	1	Z1	10
4238	MAMALA	10NOV82	CERT	2	.	.	210	.	.	.	.	1	Z1	10
4239	MAMALA	10NOV82	PERP	24	.	.	210	.	.	.	.	1	Z1	10
4240	MAMALA	10NOV82	DIAL	13	.	.	210	.	.	.	.	1	Z1	10
4241	MAMALA	10NOV82	SCOP	51	.	.	210	.	.	.	.	1	Z1	10
4242	MAMALA	10NOV82	SCAL	9	.	.	210	.	.	.	.	1	Z1	10
4243	MAMALA	10NOV82	CERI	1	.	.	210	.	.	.	.	1	Z1	10
4244	MAMALA	10NOV82	TRIP	6	.	.	210	.	.	.	.	1	Z1	10
4245	MAMALA	10NOV82	BALC	5	.	.	210	.	.	.	.	1	Z1	10
4246	MAMALA	10NOV82	HIPP	2	.	.	210	.	.	.	.	1	Z1	10
4247	MAMALA	10NOV82	NATI	3	.	.	210	.	.	.	.	1	Z1	10
4248	MAMALA	10NOV82	KUGD	2	.	.	210	.	.	.	.	1	Z1	10
4249	MAMALA	10NOV82	TURR	1	.	.	210	.	.	.	.	1	Z1	10
4250	MAMALA	10NOV82	UIND	1	.	.	210	.	.	.	.	1	Z1	10
4251	MAMALA	10NOV82	DDOS	1	.	.	210	.	.	.	.	1	Z1	10
4252	MAMALA	10NOV82	ACTE	2	.	.	210	.	.	.	.	1	Z1	10
4253	MAMALA	10NOV82	ATYS	2	.	.	210	.	.	.	.	1	Z1	10
4254	MAMALA	10NOV82	BARH	3	.	.	210	.	.	.	.	1	Z1	10
4255	MAMALA	10NOV82	USTR	8	.	.	210	1	Z1	10
4256	MAMALA	10NOV82	TELL	3	.	.	210	1	Z1	10

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OBS	LOCATION	DATE	SPECIES	ABUND	ECCORD	NCCORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
4257	MAMALA	10NOV82	CTEN	1	.	.	210	.	.	.	.	1	Z1	10
4258	MAMALA	10NOV82	BOTH	4	.	.	210	.	.	.	.	1	Z1	10
4259	MAMALA	10NOV82	EUCH	1	.	.	210	.	.	.	.	1	Z1	10
4260	MAMALA	10NOV82	LEPR	2	.	.	210	.	.	.	.	1	Z1	10
4261	MAMALA	10NOV82	CONU	1	.	.	210	.	.	.	.	1	Z1	10
4262	MAMALA	10NOV82	EMSC	1	.	.	210	.	.	.	.	1	Z2	25
4263	MAMALA	10NOV82	ALCY	5	.	.	210	.	.	.	.	1	Z2	25
4264	MAMALA	10NOV82	LEPT	4	.	.	210	.	.	.	.	1	Z2	25
4265	MAMALA	10NOV82	TRIC	68	.	.	210	.	.	.	.	1	Z2	25
4266	MAMALA	10NOV82	BARL	6	.	.	210	.	.	.	.	1	Z2	25

4267	MAMALA	10NOV82	MERL	2	.	.	210	.	.	.	.	1	ZZ	25
4268	MAMALA	10NOV82	RMIL	5	.	.	210	.	.	.	.	1	ZZ	25
4269	MAMALA	10NOV82	REPH	4	.	.	210	.	.	.	.	1	ZZ	25
4270	MAMALA	10NOV82	RHON	7	.	.	210	.	.	.	.	1	ZZ	25
4271	MAMALA	10NOV82	RTUR	2	.	.	210	.	.	.	.	1	ZZ	25
4272	MAMALA	10NOV82	CITH	12	.	.	210	.	.	.	.	1	ZZ	25
4273	MAMALA	10NOV82	PARA	3	.	.	210	.	.	.	.	1	ZZ	25
4274	MAMALA	10NOV82	POWL	1	.	.	210	.	.	.	.	1	ZZ	25
4275	MAMALA	10NOV82	LOPH	9	.	.	210	.	.	.	.	1	ZZ	25
4276	MAMALA	10NOV82	ORBR	4	.	.	210	.	.	.	.	1	ZZ	25
4277	MAMALA	10NOV82	ORBI	2	.	.	210	.	.	.	.	1	ZZ	25
4278	MAMALA	10NOV82	CAEC	7	.	.	210	.	.	.	.	1	ZZ	25
4279	MAMALA	10NOV82	BITH	2	.	.	210	.	.	.	.	1	ZZ	25
4280	MAMALA	10NOV82	BITP	3	.	.	210	.	.	.	.	1	ZZ	25
4281	MAMALA	10NOV82	BITZ	4	.	.	210	.	.	.	.	1	ZZ	25
4282	MAMALA	10NOV82	BITI	1	.	.	210	.	.	.	.	1	ZZ	25
4283	MAMALA	10NOV82	PERP	27	.	.	210	.	.	.	.	1	ZZ	25
4284	MAMALA	10NOV82	DIPL	1	.	.	210	.	.	.	.	1	ZZ	25
4285	MAMALA	10NOV82	DIAL	4	.	.	210	.	.	.	.	1	ZZ	25
4286	MAMALA	10NOV82	SCOP	15	.	.	210	.	.	.	.	1	ZZ	25
4287	MAMALA	10NOV82	SCAL	1	.	.	210	.	.	.	.	1	ZZ	25
4288	MAMALA	10NOV82	CERI	3	.	.	210	.	.	.	.	1	ZZ	25
4289	MAMALA	10NOV82	TRIP	12	.	.	210	.	.	.	.	1	ZZ	25
4290	MAMALA	10NOV82	EPIT	3	.	.	210	.	.	.	.	1	ZZ	25
4291	MAMALA	10NOV82	BALC	8	.	.	210	.	.	.	.	1	ZZ	25
4292	MAMALA	10NOV82	NATI	5	.	.	210	.	.	.	.	1	ZZ	25
4293	MAMALA	10NOV82	OTHE	5	.	.	210	.	.	.	.	1	ZZ	25
4294	MAMALA	10NOV82	KUGO	5	.	.	210	.	.	.	.	1	ZZ	25
4295	MAMALA	10NOV82	TURR	4	.	.	210	.	.	.	.	1	ZZ	25
4296	MAMALA	10NOV82	MTR	1	.	.	210	.	.	.	.	1	ZZ	25
4297	MAMALA	10NOV82	PUPA	2	.	.	210	.	.	.	.	1	ZZ	25
4298	MAMALA	10NOV82	PYRU	2	.	.	210	.	.	.	.	1	ZZ	25
4299	MAMALA	10NOV82	MORU	1	.	.	210	.	.	.	.	1	ZZ	25
4300	MAMALA	10NOV82	UIND	1	.	.	210	.	.	.	.	1	ZZ	25
4301	MAMALA	10NOV82	ODDS	4	.	.	210	.	.	.	.	1	ZZ	25
4302	MAMALA	10NOV82	ACTE	2	.	.	210	.	.	.	.	1	ZZ	25
4303	MAMALA	10NOV82	BRAC	1	.	.	210	.	.	.	.	1	ZZ	25
4304	MAMALA	10NOV82	HARB	9	.	.	210	.	.	.	.	1	ZZ	25
4305	MAMALA	10NOV82	ROCH	3	.	.	210	.	.	.	.	1	ZZ	25
4306	MAMALA	10NOV82	OSTR	4	.	.	210	.	.	.	.	1	ZZ	25
4307	MAMALA	10NOV82	TELL	2	.	.	210	.	.	.	.	1	ZZ	25
4308	MAMALA	10NOV82	LIMU	2	.	.	210	.	.	.	.	1	ZZ	25
4309	MAMALA	10NOV82	BOTH	4	.	.	210	.	.	.	.	1	ZZ	25
4310	MAMALA	10NOV82	EUCH	2	.	.	210	.	.	.	.	1	ZZ	25
4311	MAMALA	10NOV82	LEPR	5	.	.	210	1	ZZ	25
4312	MAMALA	10NOV82	COND	4	.	.	210	1	ZZ	25

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4313	MAMALA	10NOV82	TRIC	16	.	.	210	1	Z3	5
4314	MAMALA	10NOV82	BARL	3	.	.	210	1	Z3	5
4315	MAMALA	10NOV82	MRRL	2	.	.	210	1	Z3	5
4316	MAMALA	10NOV82	RMIL	5	.	.	210	.	.	.	.	1	Z3	5
4317	MAMALA	10NOV82	REPH	3	.	.	210	.	.	.	.	1	Z3	5
4318	MAMALA	10NOV82	RHON	2	.	.	210	.	.	.	.	1	Z3	5
4319	MAMALA	10NOV82	CITH	30	.	.	210	.	.	.	.	1	Z3	5
4320	MAMALA	10NOV82	PARA	4	.	.	210	.	.	.	.	1	Z3	5
4321	MAMALA	10NOV82	LOPH	6	.	.	210	.	.	.	.	1	Z3	5
4322	MAMALA	10NOV82	ORBR	10	.	.	210	.	.	.	.	1	Z3	5
4323	MAMALA	10NOV82	CAEC	5	.	.	210	.	.	.	.	1	Z3	5
4324	MAMALA	10NOV82	STRE	1	.	.	210	.	.	.	.	1	Z3	5
4325	MAMALA	10NOV82	BITP	3	.	.	210	.	.	.	.	1	Z3	5
4326	MAMALA	10NOV82	BITZ	2	.	.	210	.	.	.	.	1	Z3	5
4327	MAMALA	10NOV82	PERP	12	.	.	210	.	.	.	.	1	Z3	5
4328	MAMALA	10NOV82	DIAL	7	.	.	210	.	.	.	.	1	Z3	5

4329	MAMALA	10NOV82	SCUP	36	.	.	210	.	.	.	.	1	Z3	5
4330	MAMALA	10NOV82	SCAL	12	.	.	210	.	.	.	.	1	Z3	5
4331	MAMALA	10NOV82	CERI	2	.	.	210	.	.	.	.	1	Z3	5
4332	MAMALA	10NOV82	TRIP	1	.	.	210	.	.	.	.	1	Z3	5
4333	MAMALA	10NOV82	EPIT	1	.	.	210	.	.	.	.	1	Z3	5
4334	MAMALA	10NOV82	BALC	19	.	.	210	.	.	.	.	1	Z3	5
4335	MAMALA	10NOV82	HIPP	2	.	.	210	.	.	.	.	1	Z3	5
4336	MAMALA	10NOV82	NATI	1	.	.	210	.	.	.	.	1	Z3	5
4337	MAMALA	10NOV82	KOGO	1	.	.	210	.	.	.	.	1	Z3	5
4338	MAMALA	10NOV82	MITR	1	.	.	210	.	.	.	.	1	Z3	5
4339	MAMALA	10NOV82	ROCH	1	.	.	210	.	.	.	.	1	Z3	5
4340	MAMALA	10NOV82	OSTR	1	.	.	210	.	.	.	.	1	Z3	5
4341	MAMALA	10NOV82	KANE	11	.	.	210	.	.	.	.	1	Z3	5
4342	MAMALA	10NOV82	HEMI	1	.	.	210	.	.	.	.	1	Z3	5
4343	MAMALA	10NOV82	BOTH	1	.	.	210	.	.	.	.	1	Z3	5
4344	MAMALA	10NOV82	LEPR	2	.	.	210	.	.	.	.	1	Z3	5
4345	MAMALA	10NOV82	TURB	1	.	.	210	.	.	.	.	1	Z3	5
4346	MAMALA	10NOV82	EMSC	5	.	.	210	.	.	.	.	1	Z4	5
4347	MAMALA	10NOV82	SYNA	1	.	.	210	.	.	.	.	1	Z4	5
4348	MAMALA	10NOV82	TRIC	8	.	.	210	.	.	.	.	1	Z4	5
4349	MAMALA	10NOV82	BARL	5	.	.	210	.	.	.	.	1	Z4	5
4350	MAMALA	10NOV82	RMIL	2	.	.	210	.	.	.	.	1	Z4	5
4351	MAMALA	10NOV82	RHON	5	.	.	210	.	.	.	.	1	Z4	5
4352	MAMALA	10NOV82	CITH	12	.	.	210	.	.	.	.	1	Z4	5
4353	MAMALA	10NOV82	PARA	3	.	.	210	.	.	.	.	1	Z4	5
4354	MAMALA	10NOV82	LOPH	8	.	.	210	.	.	.	.	1	Z4	5
4355	MAMALA	10NOV82	ORBR	8	.	.	210	.	.	.	.	1	Z4	5
4356	MAMALA	10NOV82	ORBI	3	.	.	210	.	.	.	.	1	Z4	5
4357	MAMALA	10NOV82	CAEC	7	.	.	210	.	.	.	.	1	Z4	5
4358	MAMALA	10NOV82	STRE	7	.	.	210	.	.	.	.	1	Z4	5
4359	MAMALA	10NOV82	CERT	1	.	.	210	.	.	.	.	1	Z4	5
4360	MAMALA	10NOV82	PERP	7	.	.	210	.	.	.	.	1	Z4	5
4361	MAMALA	10NOV82	DIAL	9	.	.	210	.	.	.	.	1	Z4	5
4362	MAMALA	10NOV82	SCOP	31	.	.	210	.	.	.	.	1	Z4	5
4363	MAMALA	10NOV82	FULY	1	.	.	210	.	.	.	.	1	Z4	5
4364	MAMALA	10NOV82	SCAL	9	.	.	210	.	.	.	.	1	Z4	5
4365	MAMALA	10NOV82	CERI	3	.	.	210	.	.	.	.	1	Z4	5
4366	MAMALA	10NOV82	BALC	10	.	.	210	1	Z4	5
4367	MAMALA	10NOV82	NATI	1	.	.	210	1	Z4	5
4368	MAMALA	10NOV82	TURR	2	.	.	210	1	Z4	5

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OBS	LOCATION	DATE	SPECIES	ABUND	ECOORD	NCOORD	DEPTH	OXDEMAND	TKN	TOTALP	TOTALSUL	REPL	STATION	VOL
4369	MAMALA	10NOV82	ODDS	2	.	.	210	.	.	.	.	1	Z4	5
4370	MAMALA	10NOV82	ACTE	1	.	.	210	.	.	.	.	1	Z4	5
4371	MAMALA	10NOV82	ATYS	1	.	.	210	.	.	.	.	1	Z4	5
4372	MAMALA	10NOV82	RUCH	1	.	.	210	.	.	.	.	1	Z4	5
4373	MAMALA	10NOV82	OSTR	2	.	.	210	.	.	.	.	1	Z4	5
4374	MAMALA	10NOV82	KANE	1	.	.	210	.	.	.	.	1	Z4	5
4375	MAMALA	10NOV82	LIMO	1	.	.	210	.	.	.	.	1	Z4	5
4376	MAMALA	10NOV82	BOTH	1	.	.	210	.	.	.	.	1	Z4	5
4377	MAMALA	10NOV82	LEPR	3	.	.	210	.	.	.	.	1	Z4	5
4378	MAMALA	10NOV82	COND	1	.	.	210	.	.	.	.	1	Z4	5
4379	MAMALA	10NOV82	EMSC	1	.	.	210	.	.	.	.	1	Z5	25
4380	MAMALA	10NOV82	TRIC	28	.	.	210	.	.	.	.	1	Z5	25
4381	MAMALA	10NOV82	BARL	10	.	.	210	.	.	.	.	1	Z5	25
4382	MAMALA	10NOV82	MERL	8	.	.	210	.	.	.	.	1	Z5	25
4383	MAMALA	10NOV82	RMIL	6	.	.	210	.	.	.	.	1	Z5	25
4384	MAMALA	10NOV82	REPH	4	.	.	210	.	.	.	.	1	Z5	25
4385	MAMALA	10NOV82	RHON	6	.	.	210	.	.	.	.	1	Z5	25
4386	MAMALA	10NOV82	RTRI	2	.	.	210	.	.	.	.	1	Z5	25
4387	MAMALA	10NOV82	RTUR	2	.	.	210	.	.	.	.	1	Z5	25
4388	MAMALA	10NOV82	CITH	32	.	.	210	.	.	.	.	1	Z5	25
4389	MAMALA	10NOV82	PARA	3	.	.	210	.	.	.	.	1	Z5	25
4390	MAMALA	10NOV82	REHI	1	.	.	210	.	.	.	.	1	Z5	25

4391	MAMALA	10NOV82	LUPH	9	.	.	210	.	.	.	.	.	1	Z5	4391
4392	MAMALA	10NOV82	URBH	1	.	.	210	.	.	.	.	.	1	Z5	4392
4393	MAMALA	10NOV82	CAEC	14	.	.	210	.	.	.	.	.	1	Z5	4393
4394	MAMALA	10NOV82	BITH	1	.	.	210	.	.	.	.	.	1	Z5	4394
4395	MAMALA	10NOV82	BITP	3	.	.	210	.	.	.	.	.	1	Z5	4395
4396	MAMALA	10NOV82	PEHP	21	.	.	210	.	.	.	.	.	1	Z5	4396
4397	MAMALA	10NOV82	DIFL	1	.	.	210	.	.	.	.	.	1	Z5	4397
4398	MAMALA	10NOV82	DIAL	9	.	.	210	.	.	.	.	.	1	Z5	4398
4399	MAMALA	10NOV82	SCDP	29	.	.	210	.	.	.	.	.	1	Z5	4399
4400	MAMALA	10NOV82	FULV	1	.	.	210	.	.	.	.	.	1	Z5	4400
4401	MAMALA	10NOV82	SCAL	1	.	.	210	.	.	.	.	.	1	Z5	4401
4402	MAMALA	10NOV82	CERI	6	.	.	210	.	.	.	.	.	1	Z5	4402
4403	MAMALA	10NOV82	TRIP	14	.	.	210	.	.	.	.	.	1	Z5	4403
4404	MAMALA	10NOV82	BALC	9	.	.	210	.	.	.	.	.	1	Z5	4404
4405	MAMALA	10NOV82	HIPP	1	.	.	210	.	.	.	.	.	1	Z5	4405
4406	MAMALA	10NOV82	NATI	4	.	.	210	.	.	.	.	.	1	Z5	4406
4407	MAMALA	10NOV82	KOGO	2	.	.	210	.	.	.	.	.	1	Z5	4407
4408	MAMALA	10NOV82	TURK	7	.	.	210	.	.	.	.	.	1	Z5	4408
4409	MAMALA	10NOV82	MITR	1	.	.	210	.	.	.	.	.	1	Z5	4409
4410	MAMALA	10NOV82	PYRD	1	.	.	210	.	.	.	.	.	1	Z5	4410
4411	MAMALA	10NOV82	MORU	1	.	.	210	.	.	.	.	.	1	Z5	4411
4412	MAMALA	10NOV82	UIND	1	.	.	210	.	.	.	.	.	1	Z5	4412
4413	MAMALA	10NOV82	DDOS	5	.	.	210	.	.	.	.	.	1	Z5	4413
4414	MAMALA	10NOV82	ACTE	1	.	.	210	.	.	.	.	.	1	Z5	4414
4415	MAMALA	10NOV82	WILL	1	.	.	210	.	.	.	.	.	1	Z5	4415
4416	MAMALA	10NOV82	BARH	2	.	.	210	.	.	.	.	.	1	Z5	4416
4417	MAMALA	10NOV82	CHLA	1	.	.	210	.	.	.	.	.	1	Z5	4417
4418	MAMALA	10NOV82	ROCH	3	.	.	210	.	.	.	.	.	1	Z5	4418
4419	MAMALA	10NOV82	OSTR	3	.	.	210	.	.	.	.	.	1	Z5	4419
4420	MAMALA	10NOV82	KANE	1	.	.	210	.	.	.	.	.	1	Z5	4420
4421	MAMALA	10NOV82	TELL	3	.	.	210	.	.	.	.	.	1	Z5	4421
4422	MAMALA	10NOV82	HEMI	1	.	.	210	.	.	.	.	.	1	Z5	4422
4423	MAMALA	10NOV82	CTEN	1	.	.	210	1	Z5	4423
4424	MAMALA	10NOV82	BOTH	2	.	.	210	1	Z5	4424

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4425	MAMALA	10NOV82	EUCH	2	.	.	210	1	Z5	25
4426	MAMALA	10NOV82	LEPR	1	.	.	210	1	Z5	25
4427	MAMALA	10NOV82	TRIC	13	.	.	210	1	Z6	5
4428	MAMALA	10NOV82	BARL	5	.	.	210	.	.	.	.	1	Z6	5
4429	MAMALA	10NOV82	MERL	1	.	.	210	.	.	.	.	1	Z6	5
4430	MAMALA	10NOV82	CITH	16	.	.	210	.	.	.	.	1	Z6	5
4431	MAMALA	10NOV82	PARA	4	.	.	210	.	.	.	.	1	Z6	5
4432	MAMALA	10NOV82	ALVA	1	.	.	210	.	.	.	.	1	Z6	5
4433	MAMALA	10NOV82	LOPH	9	.	.	210	.	.	.	.	1	Z6	5
4434	MAMALA	10NOV82	URBH	6	.	.	210	.	.	.	.	1	Z6	5
4435	MAMALA	10NOV82	CAEC	1	.	.	210	.	.	.	.	1	Z6	5
4436	MAMALA	10NOV82	PERP	12	.	.	210	.	.	.	.	1	Z6	5
4437	MAMALA	10NOV82	SCDP	15	.	.	210	.	.	.	.	1	Z6	5
4438	MAMALA	10NOV82	CERI	1	.	.	210	.	.	.	.	1	Z6	5
4439	MAMALA	10NOV82	OTHE	2	.	.	210	.	.	.	.	1	Z6	5
4440	MAMALA	10NOV82	KUGO	4	.	.	210	.	.	.	.	1	Z6	5
4441	MAMALA	10NOV82	DDOS	1	.	.	210	.	.	.	.	1	Z6	5
4442	MAMALA	10NOV82	CHLA	1	.	.	210	.	.	.	.	1	Z6	5
4443	MAMALA	10NOV82	OSTR	1	.	.	210	.	.	.	.	1	Z6	5
4444	MAMALA	10NOV82	KANE	1	.	.	210	.	.	.	.	1	Z6	5
4445	MAMALA	10NOV82	CTEN	2	.	.	210	.	.	.	.	1	Z6	5
4446	MAMALA	10NOV82	TURB	1	.	.	210	.	.	.	.	1	Z6	5
4447	MAMALA	10NOV82	EMSC	2	.	.	210	.	.	.	.	1	Z7	5
4448	MAMALA	10NOV82	TRIC	7	.	.	210	.	.	.	.	1	Z7	5
4449	MAMALA	10NOV82	BARL	3	.	.	210	.	.	.	.	1	Z7	5
4450	MAMALA	10NOV82	PEHP	2	.	.	210	.	.	.	.	1	Z7	5
4451	MAMALA	10NOV82	CITH	7	.	.	210	.	.	.	.	1	Z7	5
4452	MAMALA	10NOV82	PARA	8	.	.	210	.	.	.	.	1	Z7	5

4	4453	MAMALA	10NOV82	LUPH	15	.	.	210	.	.	.	.	1	27	5
5	4454	MAMALA	10NOV82	URBR	12	.	.	210	.	.	.	.	1	27	5
6	4455	MAMALA	10NOV82	ORBI	1	.	.	210	.	.	.	.	1	27	5
7	4456	MAMALA	10NOV82	CAEC	6	.	.	210	.	.	.	.	1	27	5
8	4457	MAMALA	10NOV82	BITP	1	.	.	210	.	.	.	.	1	27	5
9	4458	MAMALA	10NOV82	PLRP	3	.	.	210	.	.	.	.	1	27	5
10	4459	MAMALA	10NOV82	SCDP	10	.	.	210	.	.	.	.	1	27	5
11	4460	MAMALA	10NOV82	SCAL	3	.	.	210	.	.	.	.	1	27	5
12	4461	MAMALA	10NOV82	CERI	1	.	.	210	.	.	.	.	1	27	5
13	4462	MAMALA	10NOV82	EPIT	1	.	.	210	.	.	.	.	1	27	5
14	4463	MAMALA	10NOV82	BALC	5	.	.	210	.	.	.	.	1	27	5
15	4464	MAMALA	10NOV82	ACTE	2	.	.	210	.	.	.	.	1	27	5
16	4465	MAMALA	10NOV82	ATYS	1	.	.	210	.	.	.	.	1	27	5
17	4466	MAMALA	10NOV82	TELL	1	.	.	210	.	.	.	.	1	27	5
18	4467	MAMALA	10NOV82	PYRD	2	.	.	210	.	.	.	.	1	27	5
19	4468	MAMALA	10NOV82	EUCH	1	.	.	210	.	.	.	.	1	27	5
20	4469	MAMALA	10NOV82	TURB	1	.	.	210	1	27	5
21	4470	MAMALA	10NOV82	LUND	1	.	.	210	1	27	5
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