TR-171

KENNETT

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Cruise Report

R/V TRIDENT CRUISE TR-171

SCHEDULE

Departed	Cadiz, Spain	31 August 1975
Arrived	Heraklion, Crete	12 September 1975

REGION INVESTIGATED

A series of piston cores, gravity cores and hydrocast stations were obtained from the extreme western part of the Mediterranean to the east of Crete (Figure 1).

DURATION OF CRUISE

Thirteen days.

SCIENTIFIC PARTY

J. P. Kennett, Chief Scientist, U.R.I.
K. Fanning Co-investigator, Univ. South Florida
T. Aspinwall, Graduate Student, U.R.I.
L. Barnard, Graduate Student, Univ. South Florida
T. Bentinen, Marine Technician, U.R.I.
B. Corliss, Graduate Student, U.R.I.
J. Hannon, Marine Technician, U.R.I.
S. Imms, Marine Technician, U.R.I.
L. Jones, Graduate Student, Univ. South Florida
D. Muerdter, Graduate Student, U.R.I.
R. Thunell, Graduate Student, U.R.I.
N. Healy-Williams, Technician, U.R.I.
D. Williams, Graduate Student, U.R.I.

PURPOSE

Two separate programs were involved in TR-171:

1. A series of piston cores (Table 1) were taken at suitable locations throughout the length of the Western Mediterranean Basin and in the western part of the Eastern Mediterranean. These cores will be used for paleoclimatic and oxygen isotope analysis in an area of relatively high sedimentation rates in a restricted setting. The volcanic ash stratigraphy, where it occurs, will be compared with paleoclimatic chronology. Traverses of cores were also taken at the eastern and western sectors of the Straits of Sicily in order to examine bottom dynamic changes on sediments that are inferred to have occurred during glacial-eustatic lowerings.

2. A series of gravity cores and associated hydrocasts were taken at suitable locations in several basins within the Mediterranean (Table 2). These will be used by Dr. K. Fanning, University of South Florida, to study dissolved silica and silica flux within upper sediment layers and at the sediment-water interface in the various partially isolated deep basins within the Mediterranean.

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RESULTS

A total of 31 piston cores were obtained from the region (Figure 1; Table 1) particularly in areas that seem isolated from the effects of turbidite deposition. Each piston core has a trigger core for core top studies. In addition two short gravity cores were taken in the Sea of Crete. For Dr. Fanning's studies, 8 gravity core and 9 hydrocast stations were successfully conducted (Table 2). It is anticipated that the material obtained will enable the planned studies to be carried out successfully.

FUNDING

The days at sea were funded under National Science Foundation Grant No. DES72-01667 (Geological Oceanography) (J. P. Kennett, Principal Investigator).

Table 1 (TR-171)

Cores for program of J. P. Kennett

Core Number	Latitude	Longitude	Water Depth	Core Length	Station #
171- 1	36°43.4'N	1°38.5'W	1665m	26'	3
171- 2	36°58.1'N	1°26.4'W	1880m	30'5"	4
171- 3	38°06'N	1°21'E	2015m	17'2"	6
171- 4	38°12.8'N	1°42.9'E	1575m	24'6"	7
171- 5	38°35'N	3°09'E	2600m	25'10"	8
171- 6	38°47.4'N	4°02'E	2190m	32'4"	9
171- 7	37°50'N	8°29'E	2025m	36'5"	13
171- 8	38°00.7'N	8°54.5'E	1710m	22'1"	14
171- 9	38°18'N	9°15'E	1940m	core catcher	15
171-10	38°35.8'N	9°40.4'E	1330m	25'8"	16
171-11	38°10'N	11°13.9'E	640m	19'7"	18
171-12	38°14'N	11°15'E	1185m	27'3"	19
171-13	38°20.4'N	11°48.3'E	760m	22'8 3/4"	20
171-14	38°00.6'N	11°47.8'E	475m	23'10 1/2"	21
171-15	36°44'N	13°57'E	820m	25'4"	22
171-16	35°45.9'N	15°31.8'E	460m	24'3"	23
171-17	35°21.3'N	15°35.5'E	365m	16'	24
171-18	35°10.5'N	15°37'E	565m	11'6"	25
171-19	34°58'N	15°50'E	390m	15'	26
171-20	34°06.1'N	18°15.9'E	2850m	27'7"	28
171-21	34°27.1'N	20°07.9'E	2785m	26'2"	30
171-22	34°05.84'N	21°21.72'E	2380m	18'7"	31
171-23	33°58.6'N	21°53.5'E	2160m	40'3"	32
171-24	34°03.15'N	22°43.66'E	2380m	34'3 3/4"	33
171-25	34°N	23°11'E	1740m	13'	34
171-26	33°48.5'N	24°27.6'E	1870m	20'	36
171-27	33°50'N	25°59.5'E	2680m	21'10"	37
171-28	34°50.91'N	26°23.6'E	2075m	16'	38
171-29	36°N	25°22.6'E	1600m	18'	39
171-30	35°50.96'N	25°20.98'E	930m	16'6"	40
171-31	35°39.5'N	25°17.3'E	860m	13'5"	41
GC 171-11	35°39.5'N	25°17.8'E	860m	23cms	41
GC 171-12	35°39.5'N	25°17.8'E	860m	1'6 3/4"	41

P+G 211.53m

TW = 30.m.

Table 2 (TR-171)

Stations for program of K. Fanning

Station	Position	Hydrocast	Gravity Core	Water Depth (m, uncorr.)
1	35°59.1'N, 4°57.4'W	X		885
2	36°6.9'N, 4°22.9'W		TR-171-1	1170
5	37°11.4'N, 1°00.2'W		TR-171-2	2490
	37°13.1'N, 1°00.5'W	X		2480
10	38°36.1'N, 5°5.2'E	X		2710
11	38°28.9'N, 5°46.5'E		TR-171-3	2792
12	37°58.6'N, 7°28.6'E		TR-171-4	2790
	37°58.6'N, 7°28.6'E	X		2780
17	38°50.2'N, 10°31.9'E		TR-171-5	2495
	38°50.6'N, 10°30.2'E	X		2490
27	35°24.1'N, 17°19.3'E		TR-171-6	3800
	35°24'N, 17°19.9'E	X		3800
29	34°16.9'N, 19°32'E	X		3590
30	34°25.5'N, 20°7.9'E		TR-171-7	2770
34	34°00.3'N, 23°10.9'E	X		2535
37	33°50'N, 26°00.6'E		TR-171-8	2720
	33°48'N, 26°00.4'E	X		2755

Fig. 1. TR-171 piston core locations.
Locations that are not numbered are gravity core-hydrocast stations
for Dr. K. Fanning's studies.