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|------------------------|--|
| Author | |
| Corporate Author | |
| Report/Article Title | Trip reports for Alvin L. Young (dated 12 November 1975 for trip to Eglin AFB, Florida, 15-17 October 1975) and Lorris G. Cockerham (dated 30 December 1975 for trip to Eglin AFB, Florida, 13-21 December 1975) |
| Journal/Book Title | |
| Year | 0000 |
| Menth/Bay | |
| Color | |
| Number of Images | 9 |
| Descripton Notes | Duplicate is of Cockerham trip report only. |

DEPARTMENT OF THE AIR FORCE DEPARTMENT OF CHEMISTRY AND PHYSIOLOGY USAF ACADEMY, COLORADO 80840



REPLY TO

ATTN OF: DFCP

12 November 1975

SUBJECT: Trip Report, Eglin AFB, Florida, 15-17 October 1975

TO: DFCP (Colonel Lamb)
DFCP (L/C Klinestiver)

- 1. All of the undersigned participated in a TDY to Eglin AFB, Florida, 15-17 October 1975 in support of the Herbicide Orange Project. The purpose of the trip was to transport and establish a population of beach mice onto selected sites of Test Area C-52A, Eglin AFB Reservation. Four locations were selected on the southern fringe of the one-square mile sampling grid and three locations were selected on a control area (see attch 1, map). A total of 315 beach mice were released in the late afternoon and early evening of 16 September. Each animal had been weighed and tagged. The animals were then randomly released as pairs (male and female) within the seven selected sites.
- 2. A TDY is planned to Eglin AFB for 14-20 December 1975 during which time a re-trapping program will be undertaken on those animals released on 16 October 1975. Each animal captured will be weighed and necropsied. Pelts and livers will be submitted for TCDD analyses and all remaining tissue will be prepared for histological examination.
- 3. Dr. Joe Farmer and Mr. Don Harrison of the Environics and Human Factors Office, Eglin AFB, coordinated the proposed study and furnished support to us while at Eglin AFB. In addition, Mr. Harrison relayed a completed draft of a joint USAFA/Eglin technical report on the 1974-75 ecological studies (see summary, attch 2) to AFATL/STENO.

4. Funds for this TDY were furnished by AFLC under Obligation Authority S76-51, Organization Code 824SP and totalled \$961.02.

Alvin L Young Capt, USAF

Project Officer

Associate Professor of Physiology

Charles E. Challen

CHARLES E. THALKEN, Major, USAF Project Scientist

Associate Professor of Physiology

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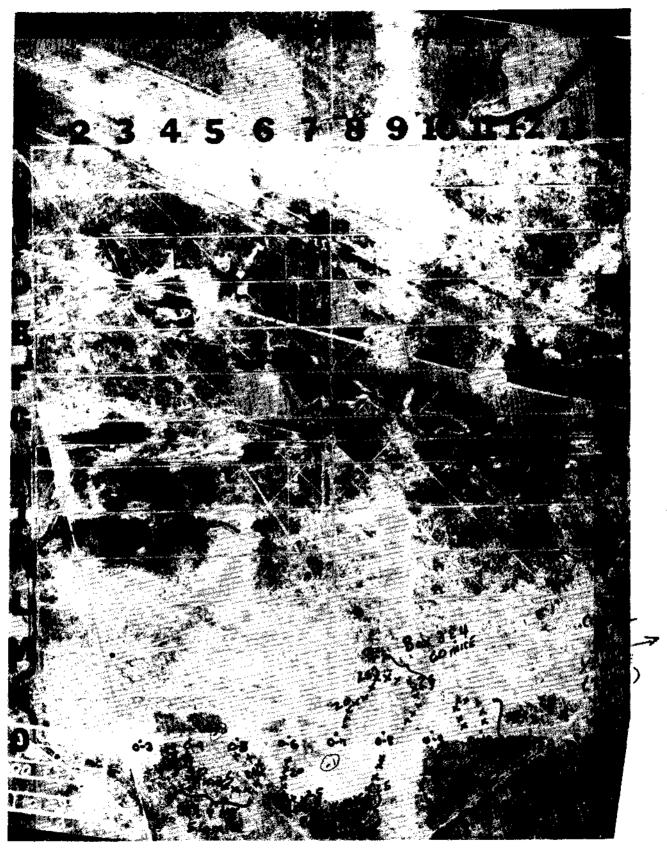
LORRIS G. COCKERHAM, Major, USAF Project Scientist

Assistant Professor of Physiology

2 Attch

1. Map

2. Summary



Photograph of Test Area C-52A Showing MICE-Release Locations,
16 October 1975.

Mix

DEPARTMENT OF THE AIR FORCE DEPARTMENT OF CHEMISTRY AND PHYSIOLOGY USAF ACADEMY, COLORADO 80840



REPLY TO

ATINOF DECP (Major Cockerham)

30 December 1975

tumber: Trip Report, Eclin AFB, Florida, 13-21 December 1975

DECP (Col Lamb, DECP (L/C Klinestiver) IN TURN

- 1. In mid-October 1975, the undersigned, Major Thalken, and Captain Young, released 315 tagged beach mice (Peromyscus rolionoty) on Crid I and an adjacent control area of Test Area C 52A. Light AFB, Florida. The present TDY was taken in an attempt to recapture the animals two months after their release.
- 2. A total of 205 havahart traps were placed in four locations on, or immediately adjacent to, Test Grid I, while 80 traps were placed in four locations on the control area. In seven days of erapping, only 14 animals were captured. As a consequence, on the last day of the trapping program, 22 mouse burrows were excavated. These burrows yielded an additional 15 live animals. Of the total 29 beachmice obtained, eight were pups; and 21 were adults. Field and necropsy data for all animals are provided in Table I (atch). Only five of the 29 animals were tagged. Two were from control locations; three were from the test site. comparing location of capture with location of release, only one animal was found in the immediate proximity of release (70 yards). The animal found farthest from release was a male released on Test Site 1 and recovered in a control area (a distance of approximately 1,000 vards). All biological samples were prepared for histological examination (attachment 2) and TCDD analysis (at. tachment 3).
- 3. Tentative results from this field study suggest that: (1) the low recovery rate of tagged animals, 5/315, or 1.6% may not, in fact, represent a measure of survival or predation, but rather that the location of trap placement (e.g. at the site of release) did not account for animal movement; (2) it would appear from observations of one of the tagged males (having chewed ears) that beach mice have a territorial instinct, and thus, many of the animals released at a specific site were forced to move (or else fight for survival) into areas of low population density and thus, out of "claimed" territory. Undoubtedly, this "forced" movement



subjected the animals to potential predation from the redtailed hawks, Mississippi kites, skunks, red fox, and snakes, and thus reduced the number of animals surviving: (3) liver levels of TCDD from the tagged animals captured on the test trid may not reflect contamination from soil in the immediate vicinity; and (4) data in a previous report by Young, Thalken, and Mard showing TCDD contamination of control animals, may now be explained by confirmed movement of mice from treated to control sites.

- 4. While visiting personnel of the Air Force Armament Laboratory, it was reported that a drum of Orange Herbicide was found on Test Hange 64A. Access and control of this material is presently monitored by the Bioenvironmental engineer, Major Martman. It was recommended that the drum be sampled for merbicide and TODD content and then sent to the Herbicide Storage Area, Naval Construction Battalion Center, Gulfport, Mississippi.
- 5. Funds for this TDY totalled \$1,368.81 and were provided from AFLC Obligation Authority S76-51.

Norris V. Cockerhom

LORRIS G. COCKERHAM, Major, USAF Assistant Professor of Physiology Associate Investigator 3 Atch

c.c. AFLC/DS (Mr. Merrill)
c.c. AFATL/DLV (Dr. Farmer)

TABLE 1: Field and Necropsied data collected on specimens of Peronyscus polionetus, 15-20 December 1975, Test Area C-52A, Eglin AFB, Florida

| DATE | LOCATION/NO. | SEX | BODY (wt/gm) | LIVER (gm) | SPLEEN (mg) | ADRENALS (mg) | KIDNEY (mg) | HEART (mg) | LUNG (mg) | COMMENT |
|--------|---------------------|-----|-----------------|---------------|-------------|------------------|----------------|---------------|--------------|--------------------------------------|
| 15 Dec | Control #375 | F | 15.836 | 0.955 | 56 | 26 | 311 | 149 | 210 | Dead/3 Embry oes-midterm- dead |
| 15 Dec | Test (I) #287 | F | 13.738 | 1.221 | 19 | 31 | 318 | 159 | 179 | One implan- tation site |
| 16 Dec | Control #CU-1 | М | 13.105 | 0.718 | 12 | 29 | 270 | 140 | 135 | Dead |
| 16 Dec | Test (I) #TU-I | M | 10.818 | 0.728 | 20 | 29 | 231 | 121 | 113 | Dead |
| 16 Dec | Test (I) #TU-2 | М | 11.396 | 0.621 | 10 | 26 | 205 | 157 | 76 | Live |
| 16 Dec | Test (III) #TU-3 | F | 17.452 | 1.102 | 2.0 | 25 | 285 | 153 | 112 | Live/3 Embry oes ~15 Days |
| 17 Dec | Control #168 | М | 13.523 | 0.895 | 10 | 49 | 273 | 129 | 137 | Dead |
| 17 Dec | Test (I) #TU-5 | M | 8.555 | 0.540 | 15 | 13 | 172 | 87 | 119 | Dead |
| 17 Dec | Test (III) #TU-4 | M | 9.366 | 0.559 | 14 | 15 | 199 | 105 | 118 | Dead |
| 17 Dec | Control #CU-2 | М | 13.108 | 0.899 | 16 | 32 | 262 | 131 | 135 | Live |
| 18 Dec | Control | F | 10.268 | 0.693 | 22 | 19 | 230 | 1.23 | 105 | Dead |
| 18 Dec | Test (III) | 7 | 15.670 | 1.133 | 4.3 | 23 | 515 | 103 | 130 | Live/Pregnan embryoes |
| 18 Dec | Test (IV) | M | 10.97 | 0.795 | - | 1 7 | 206 | 117 | 113 | Live |
| 18 Dec | Test (1V) TU-8 | | 11,099 | 0.820 | 17 | 11 | 221 | 138 | 105 | Live |

TABLE 1: Field and Necropsied data collected on specimens of Peromyscus polionatus, 15-20 be ember 1975, Test in C-52A, Eglin AFB, Florida

| DATE | LOCATION, NO. | SEX | . 1 | LIVER | SELFEN | ADRENALS | KIDNEY | TE.LETT | | † GOVERNT |
|--------|---------------------|-----|---------|-------|------------|----------|--------|---------|--------------------|---------------------------|
| | | | (wt/gm) | (gm) | (mg) 15 | (ng) | (mg) | (mg) | <u>(1.5)</u> | |
| 20 Dec | Test (IV) #TU-9 | M | 12.256 | 0.749 | 15 | 20 | 236 | 25 | 0.2 | Line |
| 20 Dec | Test (11) #TU-10 | М | 12.269 | 0.723 | 2.4 | 2.2 | 2.11 | 141 | \mathfrak{g}_{+} | Live |
| 20 Dec | Test (II) #299 | F | 17.320 | 1.095 | 2.2 | 28 | 314 | 156 | 131 | Live/Four Embryoes |
| 20 Dec | Test (IV) #302 | М | 12.950 | 0.933 | 6 | 38 | 252 | 137 | 15! | Live |
| 20 Dec | Test (IV) #TU-11 | F | 12.974 | 1.018 | 21 | 53 | 313 | 127 | 9.5 | Nursing Female |
| 20 Dec | 10-Day 01d Pups | М | 3.961 | | * · · | | | | | Pups of TU-11 |
| | - | M | 3.884 | ļ | | | | | | i |
| | | F | 4.392 | | | | | | | |
| | | F | 4.166 | | | | | | | |
| 20 Dec | Test (I!) #TU-12 | F | 6.457 | 0.507 | 21 | 9 | 113 | | 81 | Conth-old pup |
| 20 Dec | Test (II) #TU-13 | М | 6.976 | 0.578 | 33 | 9 | 130 | 126 | 7.4 | Month-old pup of TV-16 |
| 20 Dec | Test (II) #TU-14 | М | 6.654 | 0.481 | 2,8 | 9 | 129 | 93 | 6.5 | Month-old pup of TU-16 |
| 20 Dec | Test (II) #TU-15 | М | 6.322 | 0.576 | 16 | 8 | 138 | 82 | 5.5 | Month-old pup of TU-16 |
| 20 Dec | Test (II) #TU-16 | F | 15.420 | 1.304 | 22 | 16 | 363 | 168 | 116 | Nursing Female |
| 20 Dec | Control #CU-4 | F | 10.518 | 0.693 | 26 | 15 | 220 | 112 | 9.8 | Live |

... *[1]*

BIOLOGICAL SPECIMENS FOR HISTOLOGICAL ANALYSIS EGLIN AFB, FLORIDA 14-20 DEC 1975

The following histological specimens were collected for analysis from control or test (TCDD-exposed) sites on the Test Area C-52A, Eglin AFB, Florida, 14-20 December 1975.

| 9 17 . 1 | Took Animal | 16 | Dogombon | 1075 |
|----------------------|-----------------------|----|----------|--------------|
| 10-1 | Test Animal | | December | |
| T U = 2 | Test Animal | 16 | December | 1975 |
| TO-3 | Test Animal | 16 | December | 1975 |
| 1:5-4 | Test Animal | 17 | December | 1975 |
| 10-5 | Test Animal | 17 | December | 1975 |
| TU - C | Test Animal | 18 | December | 1975 |
| 1.0 - 7 | Test Animal | 18 | December | 1975 |
| TU-8 | Test Animal | 18 | December | 19 75 |
| <i>T</i> iJ 0 | Test Male | 20 | December | 1975 |
| Ţ11 1 0 | Test Male | 20 | December | 1975 |
| TU-3.1 | Test Female | 20 | December | 1975 |
| TU-16 | Test Female | 20 | December | 1975 |
| CU+1 | Control Mouse | 16 | December | 1975 |
| €U-2 | Unmarked Control Male | 17 | December | 1975 |
| CU-3 | Control Female | 18 | December | 1975 |
| CU-4 | Control | 20 | December | 1975 |
| #168 | Control Male | 17 | December | 19 75 |
| #237 | Test Mouse | 15 | December | 1975 |
| #299 | Test, Site II | 20 | December | 1975 |
| #302 | Test Male | 20 | December | 1975 |
| #375 | Control Mouse | 15 | December | 1975 |
| | | | | |

BIOLOGICAL SPECIMENS FOR TCDD ANALYSIS EGLIN AFB, FLORIDA 14-20 DEC 1975

The following biological specimens were collected from control or test (TCDD-exposed) sites on the Test Area C-52A, Eglin AFB, Florida, 14-20 December 1975.

Beachmice Samples

- 1. Liver, Test, Tagged, Male/Female, Site I/IV, 15-20 Dec.
- 2. Skin, Test, Tagged, Male/Female, Site I/IV, 15-20 Dec.
- 3. Liver, Test, Unmarked, Male/Female, Site I/IV, 15-20 Dec.
- 4. Skin, Test, Unmarked, Male/Female, Site I/IV, 15-20 Dec.
- 5. Liver, Test, Tagged, Male/Female, Site II/III, 15-20 Dec.
- 6. Skin, Test, Tagged, Male/Female, Site II/III, 15-20 Dec.
- 7. Liver, Test, Unmarked, Male/Female, Site II/III, 15-20 Dec.
- 8. Skin, Test, Unmarked, Male/Female, Site II/III, 15-20 Dec.
- 9. Liver, Control, Tagged, Male/Female, Control, 15-20 Dec.
- 10. Skin, Control, Tagged, Male/Female, Control, 15-20 Dec.
- 11. Liver, Control, Unmarked, Male/Female, Control, 15-20 Dec.
- 11. biver, Control, Unmarked, Male/remaie, Control, 15-20 Dec.
- 12. Skin, Control, Unmarked, Male/Female, Control, 15-20 Dec.
- 13. Whole Bodies, 4 x 10-Day-Old Pups, Test, Site IV, 20 Dec.
- 14. Bodies (less skins), 4 x 30-Day-Old Pups, Test, Site II(N-9)20Dec
- 15. Skius (less bodies) 4x30-Day-Old-Pups, Test, Site II(N-9)20 Dec

Other Organisms

- 16. Insects (Crickets/Cockroaches) Test (Grid 1/2),30.3 gms,17 Dec
- 17. Grubs (Coleoptera), Test, Site IV, 5 gms., 19 Dec.
- 18. Snake (Wrights Brown Snake), Test, Site I, 14 Dec.
- 19. Spiders (Wolf), Test, Site II/III, 5.1 gms., 20 Dec.
- 20. Toad, Test, Site I, 46.6 gms., 20 Dec.

Nests

- 21. Control, Southwest Corner, 19 Dec.
- 22. Test, Site I, 18 Dec.
- 23. Test, Site II (N-8), 18 Dec.
- 24. Test, Site II (N-8/9), 18 Dec.
- 25. Test, Site III, 18 Dec.
- 26. Test, Site IV, (0-4, Family-Sample #13), 20 Dec.
- 27. Test, Site IV (0-4), 20 Dec.