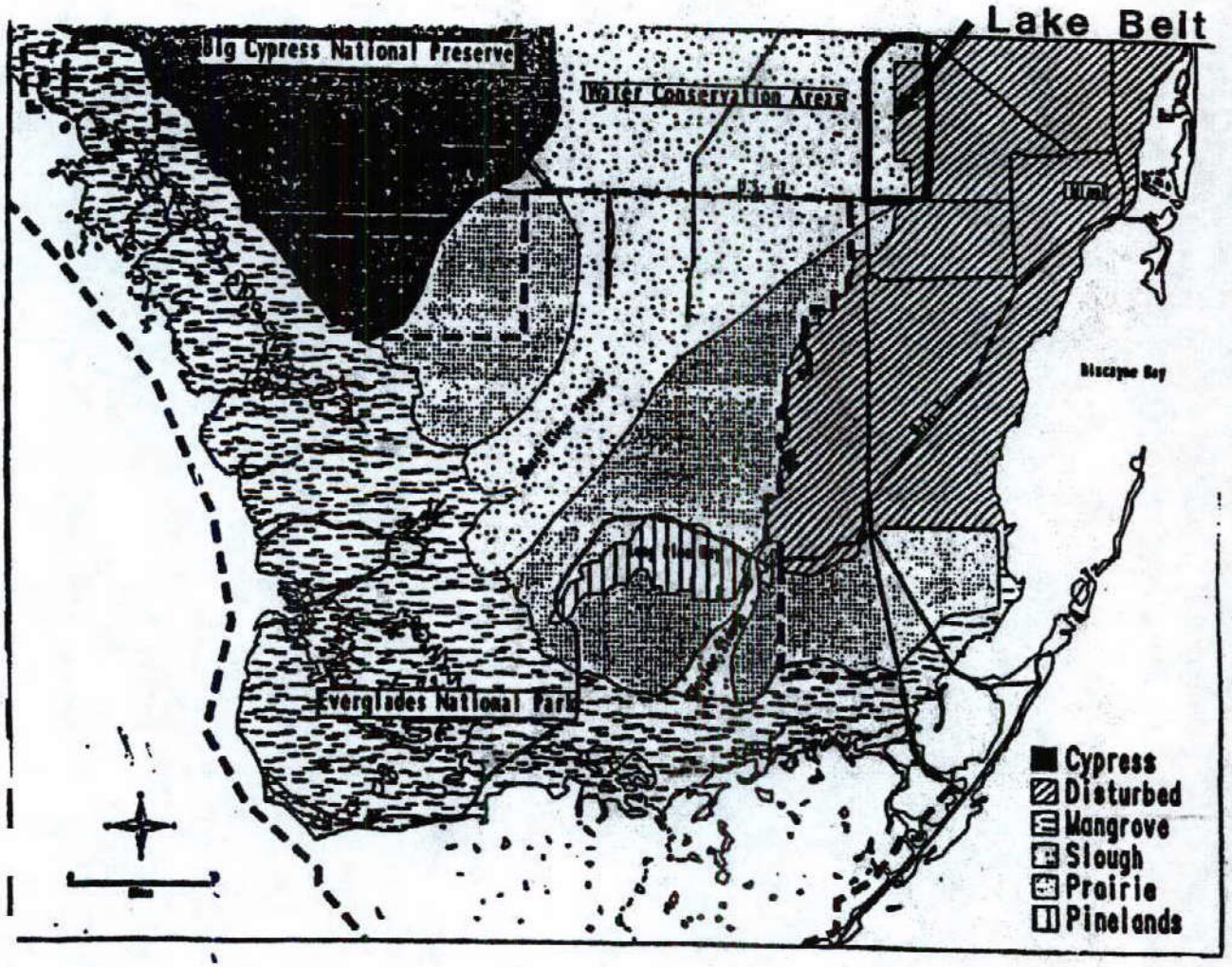
FIGURES

FIGURE 1. Major habitat types in southern Florida based upon dominant vegetation. From Dairymple and Bass, In Press.



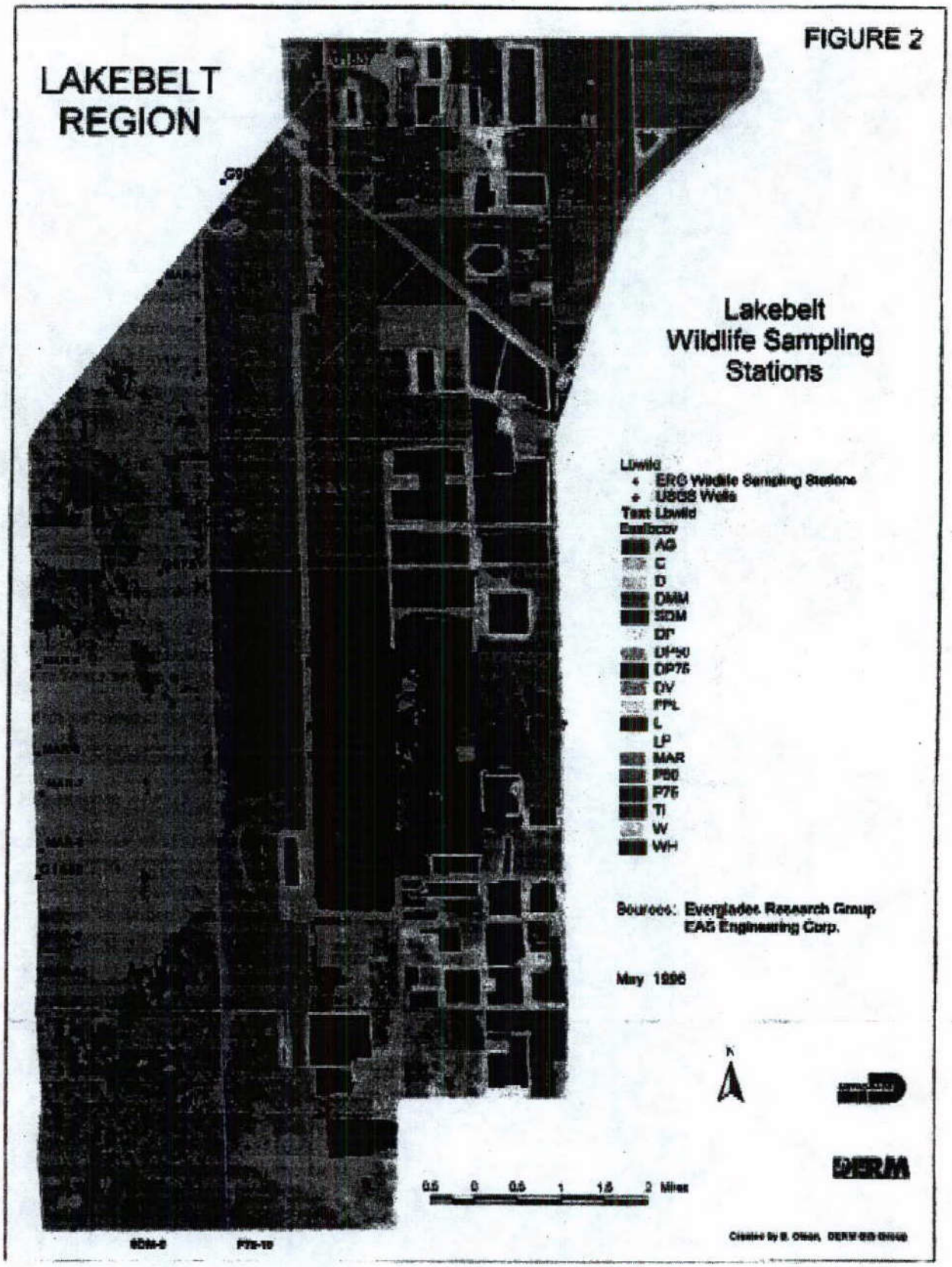
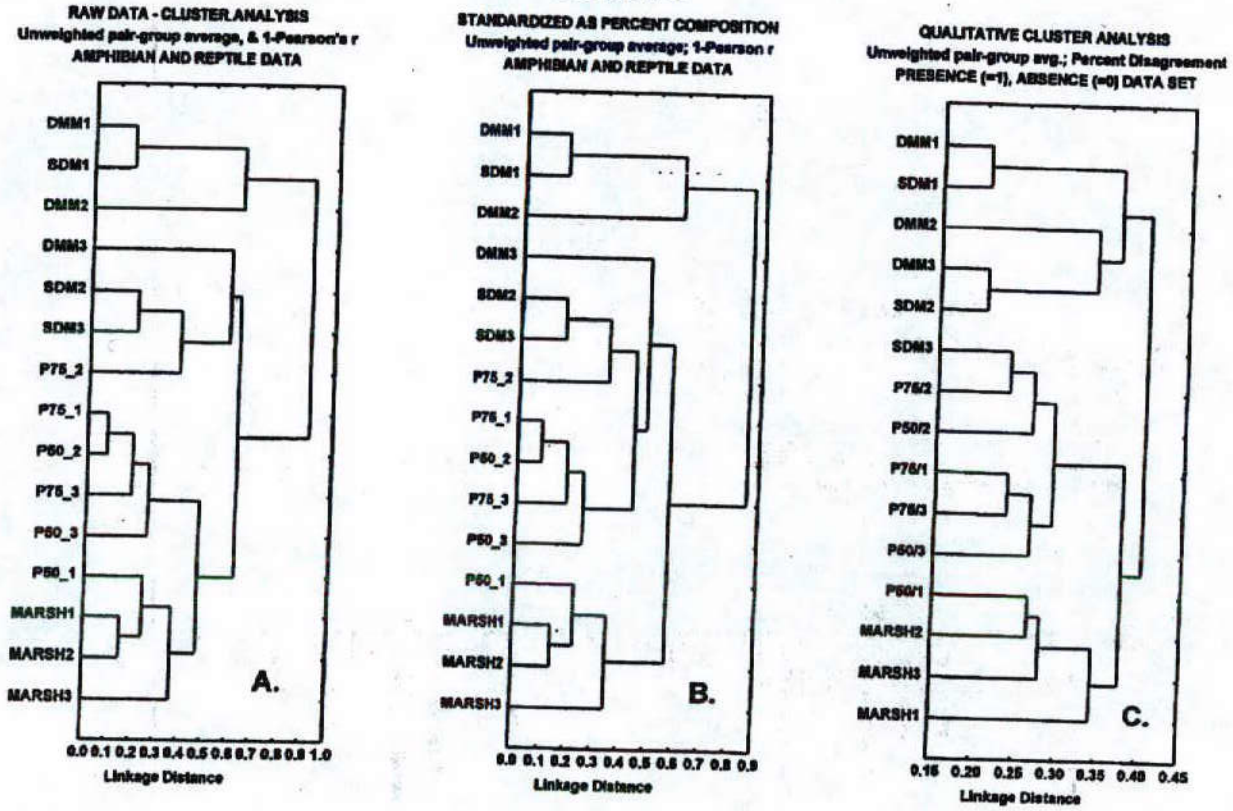


FIGURE 2
LAKEBELT REGION
Lakebelt Wildlife Sampling Stations
Lbwild
ERG Wildlife Sampling Stations
USGS Wells
Text Lbwild
Barlbcov
AG
C
D
DMM
SDM
DP
DP50
DP75
DV
FPL
L
LP
MAR
P50
P75
TI
W
WH
Sources: Everglades Research Group
EAS Engineering Corp.
May 1996
0.5 0 0.5 1 1.5 2 Miles
DERM

DOC#614

FIGURE 3.

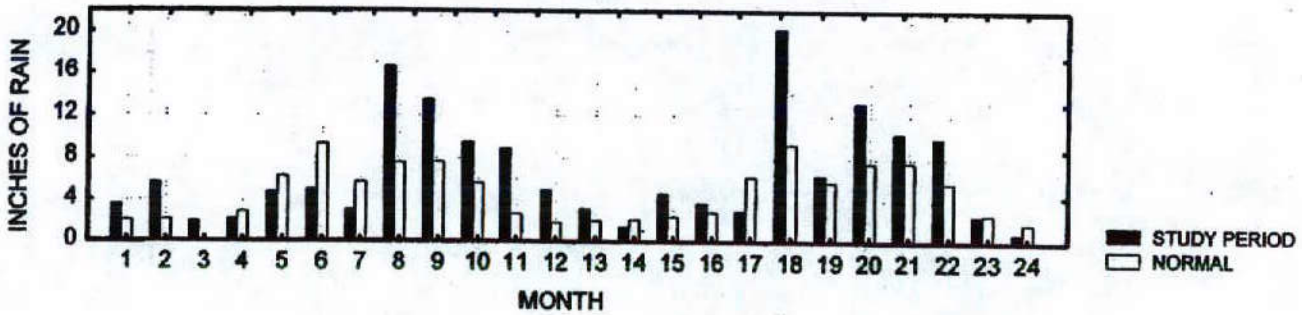


DOC#614

FIGURE 4.

A. RAINFALL DURING STUDY PERIOD - MIA RECORDINGS

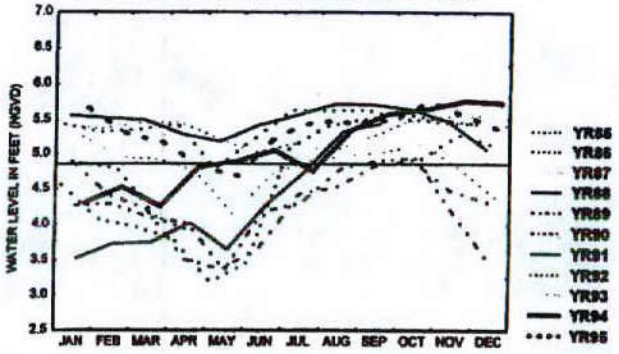
RAIN DURING STUDY VS. NORMAL (AVERAGE) VALUES



B.

USGS WELL G-872; JAN. 1985 - DEC. 1995

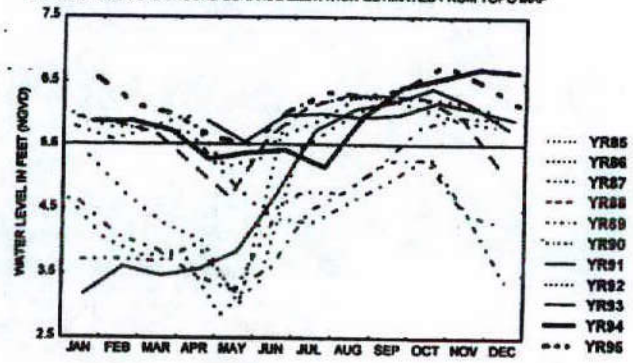
HORIZONTAL LINE IS GROUND SURFACE ELEVATION



C.

USGS WELL G-876; JAN. 1985 - DEC. 1995

HORIZONTAL LINE IS GROUND SURFACE ELEVATION ESTIMATED FROM TOPO MAP

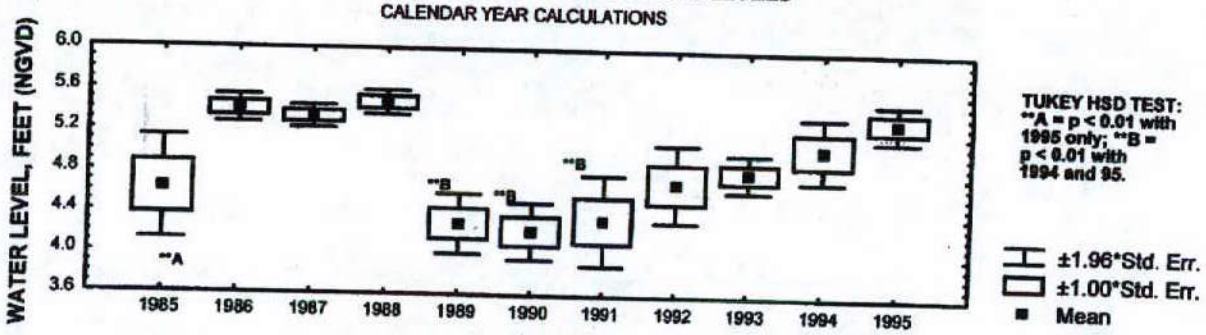


DOC#614

FIGURE 4D - E.

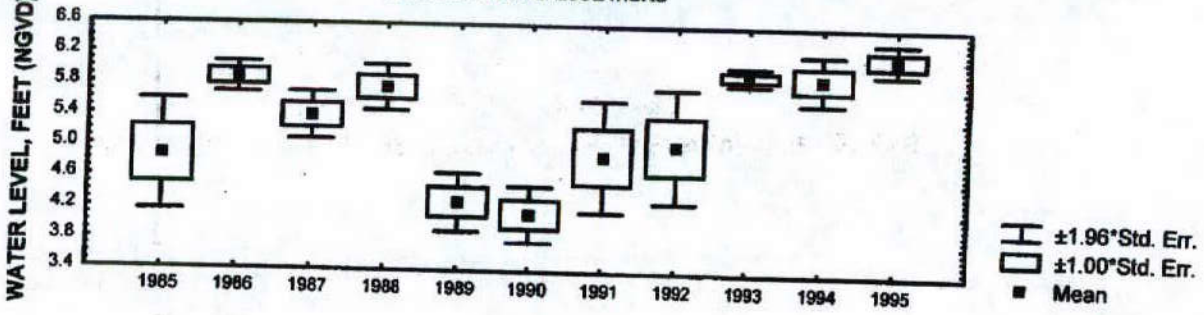
D. USGS WELL G-972 - ANNUAL MEAN WATER LEVELS

CALENDAR YEAR CALCULATIONS



E. USGS WELL G-975 - ANNUAL MEAN WATER LEVELS

CALENDAR YEAR CALCULATIONS



DOC#6 1 4

FIGURE 5A. BOX AND WHISKER PLOTS OF MEAN WATER LEVELS FOR USGS WELLS 1994 -1995

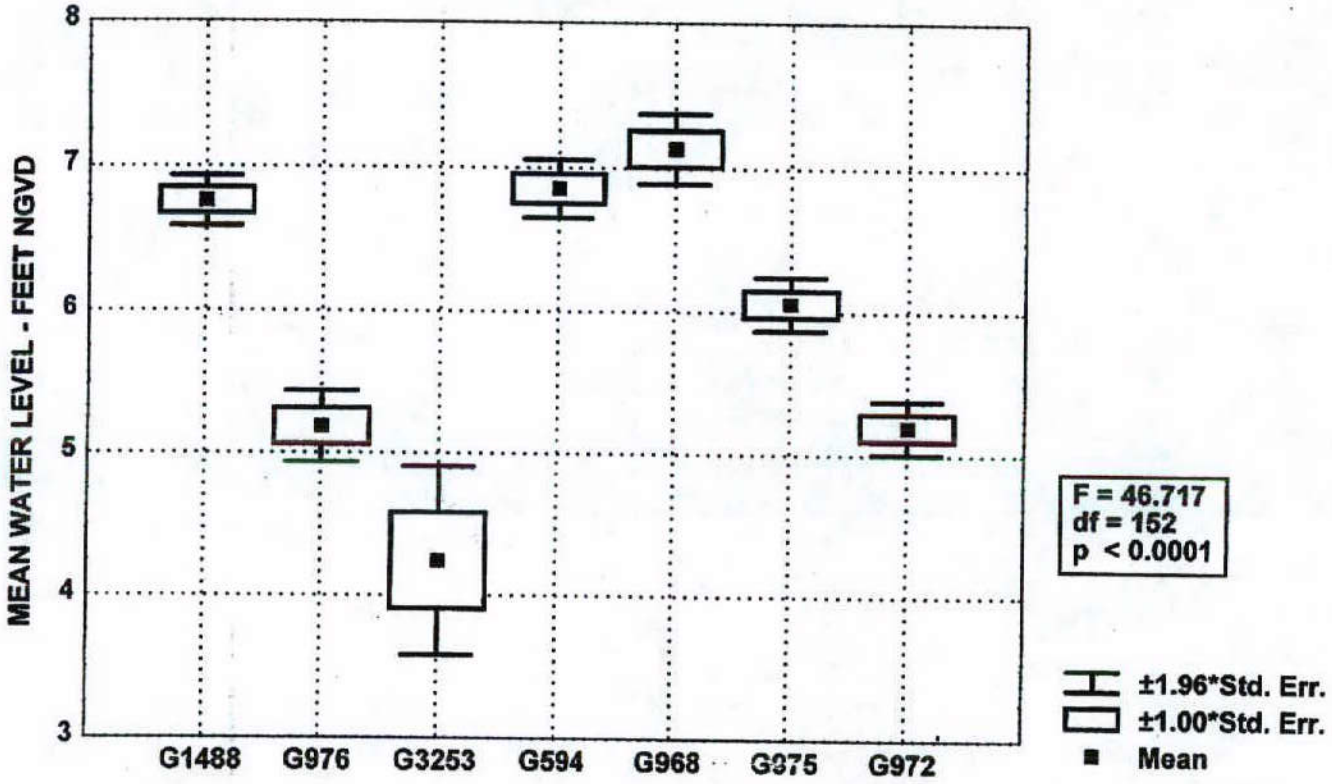


FIGURE 5B. 1994 & 1995 WATER LEVELS FOR USGS WELLS

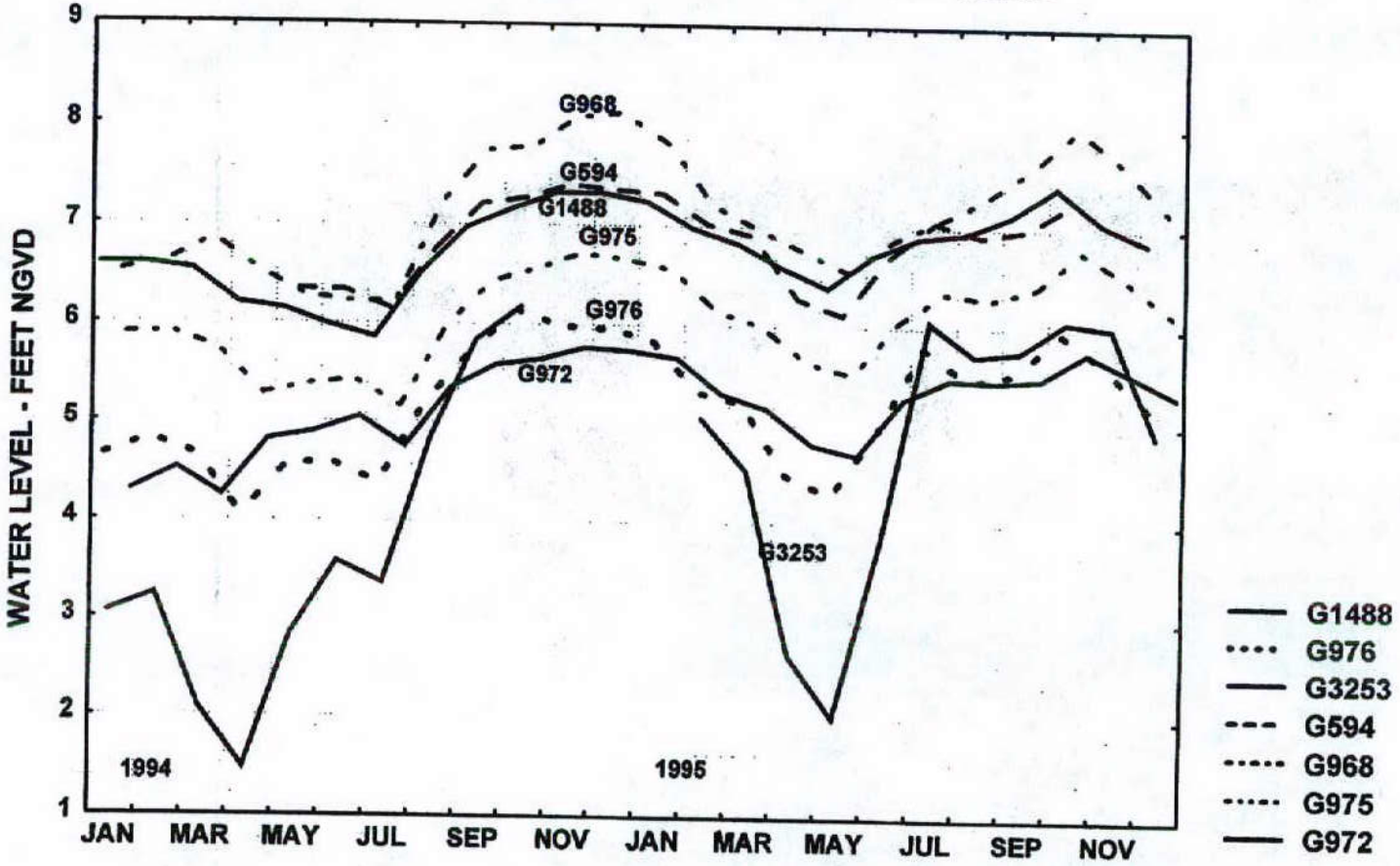


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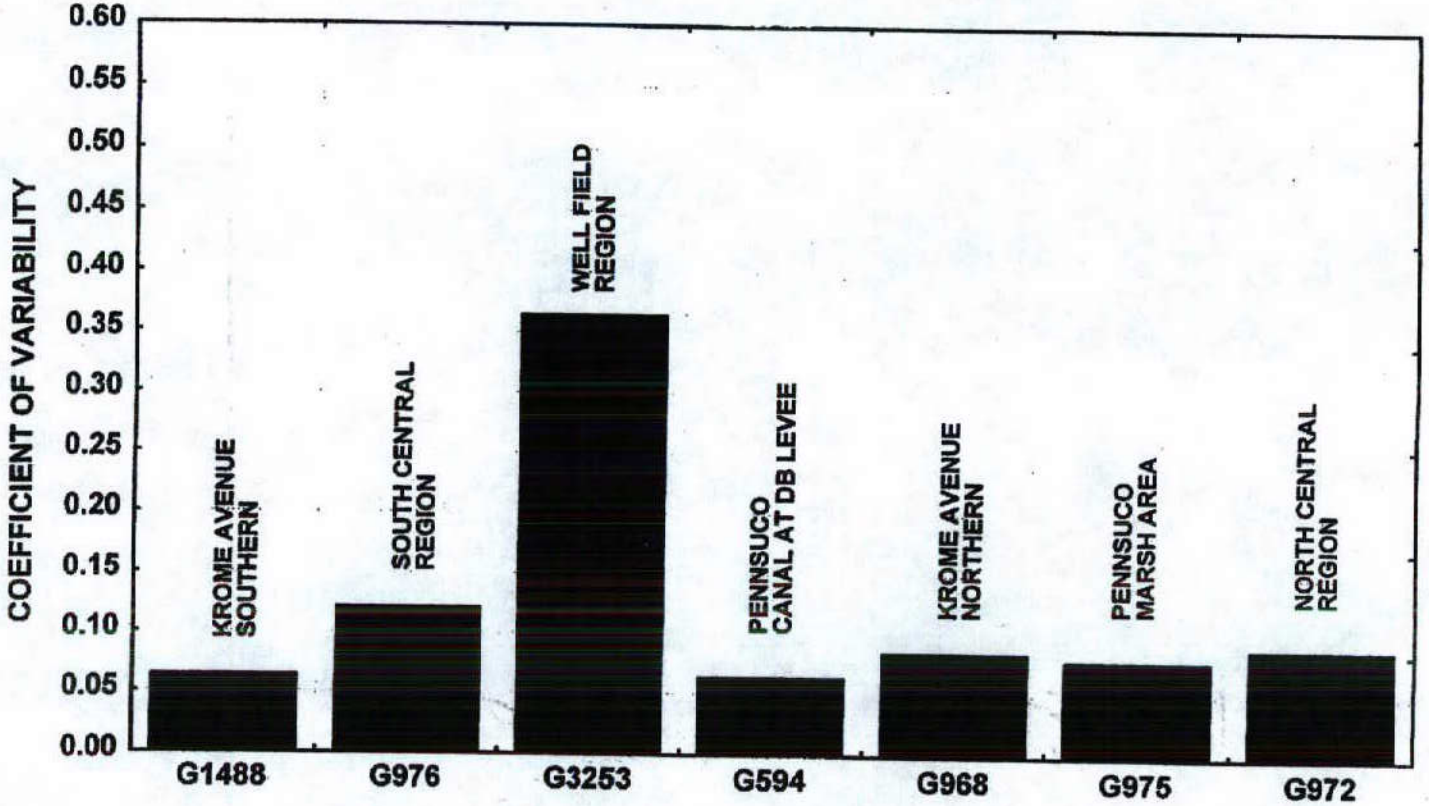
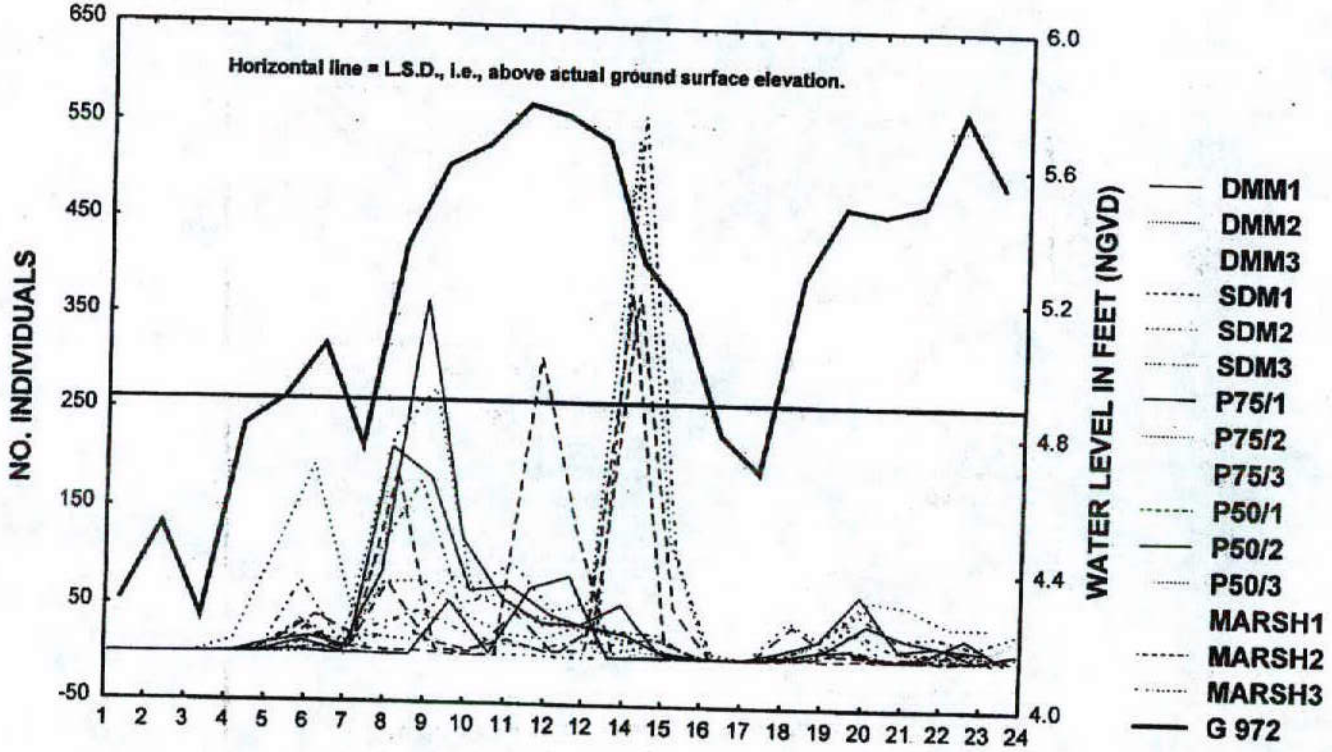
FIGURE 5C. COEFFICIENTS OF VARIABILITY (CV) IN 1994 - 1995 USGS WELL DATA
CV = STANDARD DEVIATION / MEAN
CV IS A MEASURE OF RELATIVE VARIABILITY



DOC#614

FIGURE 6.
NO. INVERTEBRATES PER MONTH - DRIFT FENCE DATA & USGS WELL G972
JAN. 1994 - DEC. 1995

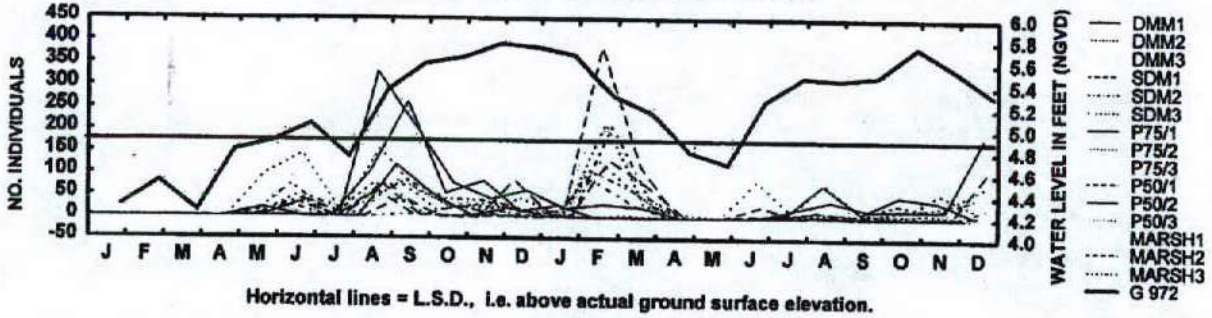


DOC#614

FIGURE 7.

A. NO. INDIVIDUALS OF FISHES PER MONTH - Jan. 1994 - Dec. 1995

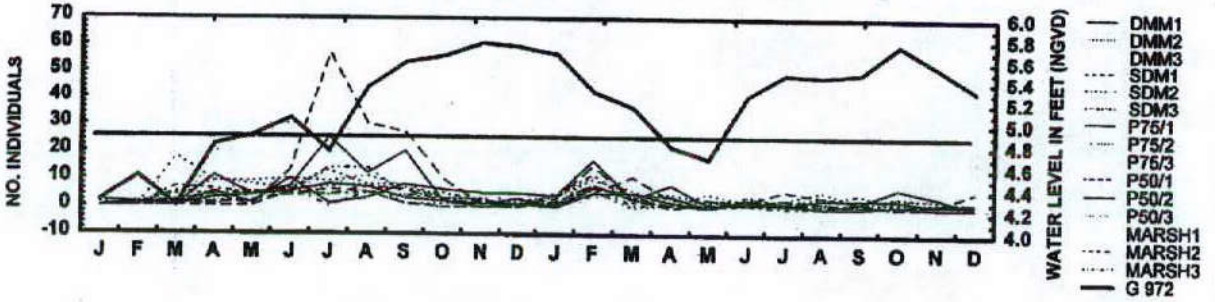
DRIFT FENCE DATA (All replicates shown) & USGS WELL G-972



Horizontal lines = L.S.D., i.e. above actual ground surface elevation.

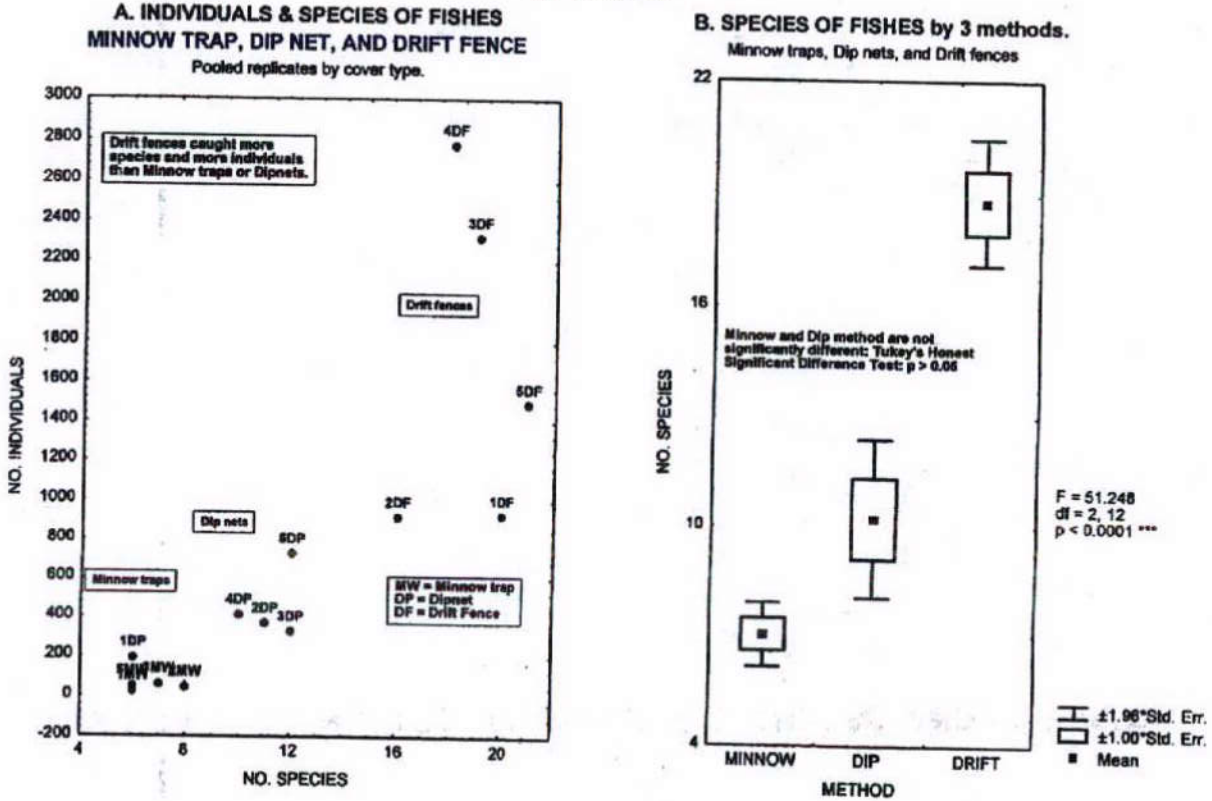
B. NO. INDIVIDUALS OF HERPTILES PER MONTH - Jan.1994 - Dec. 1985

DRIFT FENCE DATA (All replicates shown) & USGS WELL G-972



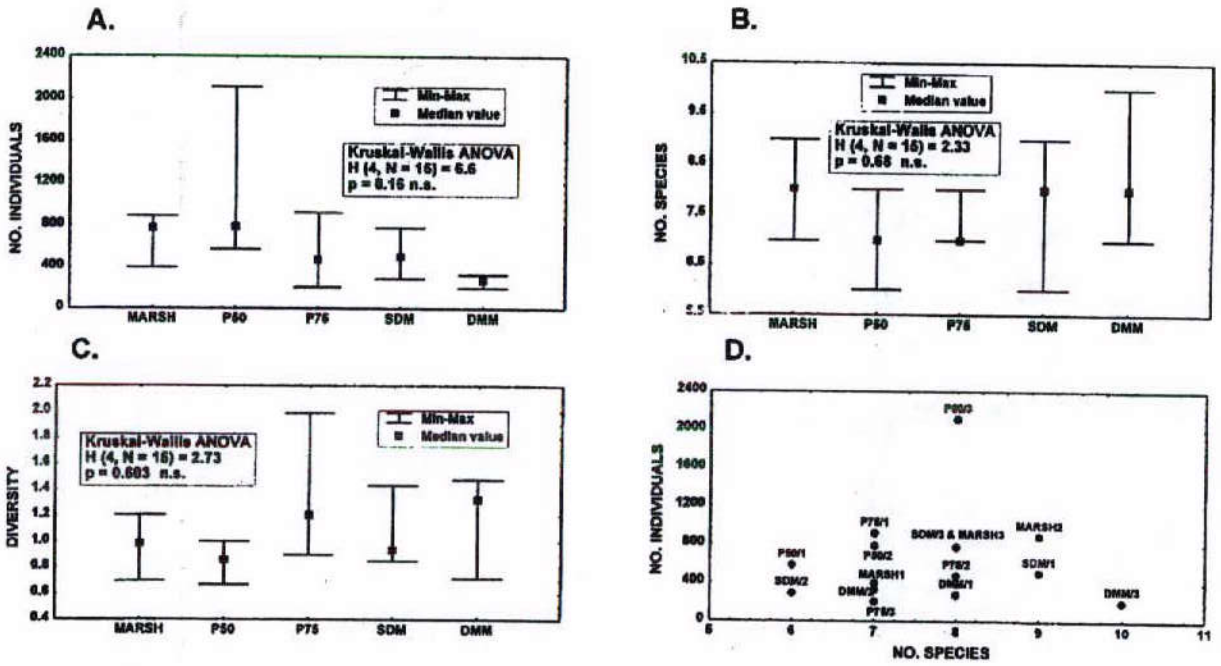
DOC#614

FIGURE 8.



DOC#614

FIGURE 9A. - D.
MACROINVERTEBRATES - ABUNDANCE, RICHNESS, AND DIVERSITY

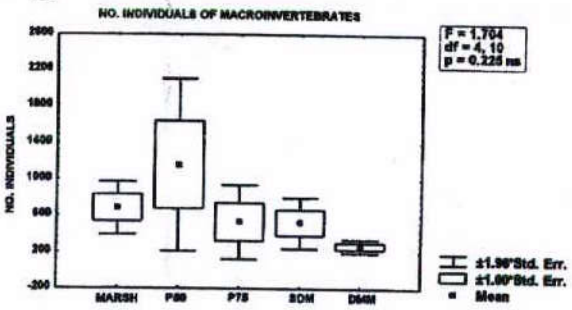


Drift fence data - 2 year cumulatives

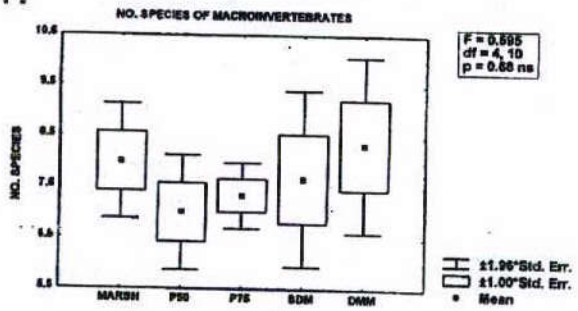
DOC#614

FIGURE 9E. - G.
MACROINVERTEBRATES - ABUNDANCE, RICHNESS, AND DIVERSITY

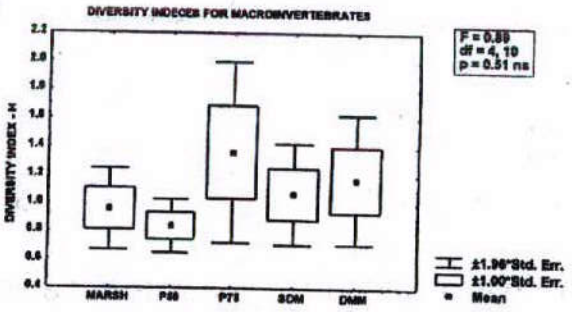
E.



F.



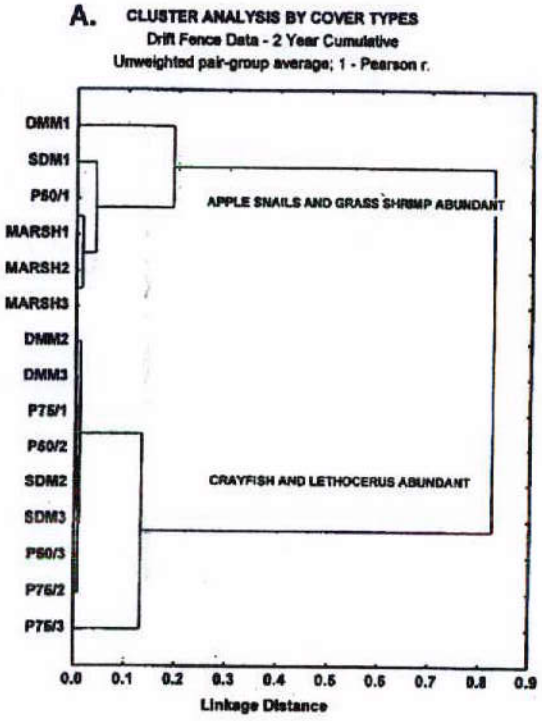
G.

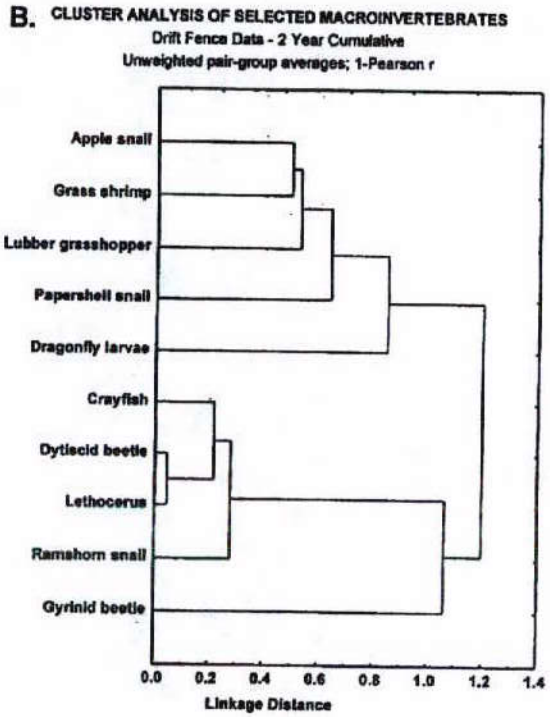


2 YEAR CUMULATIVES - DRIFT FENCE DATA

DOC#614

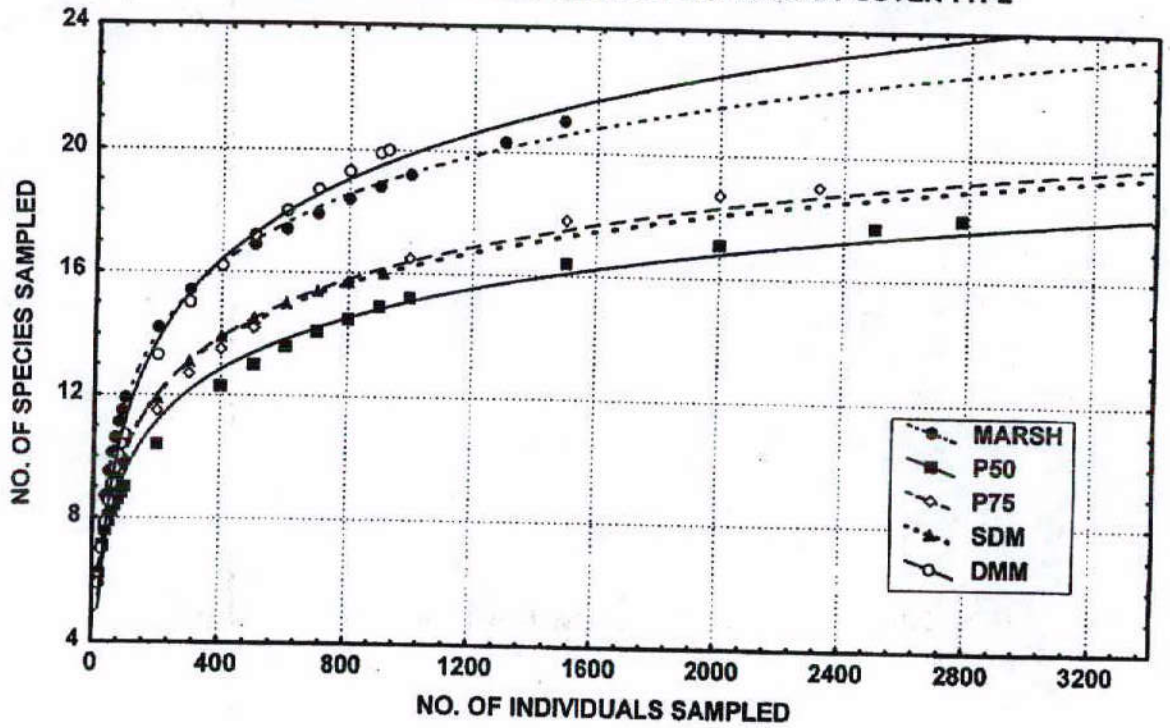
FIGURE 10.
MACROINVEREBRATES - CLUSTER ANALYSES





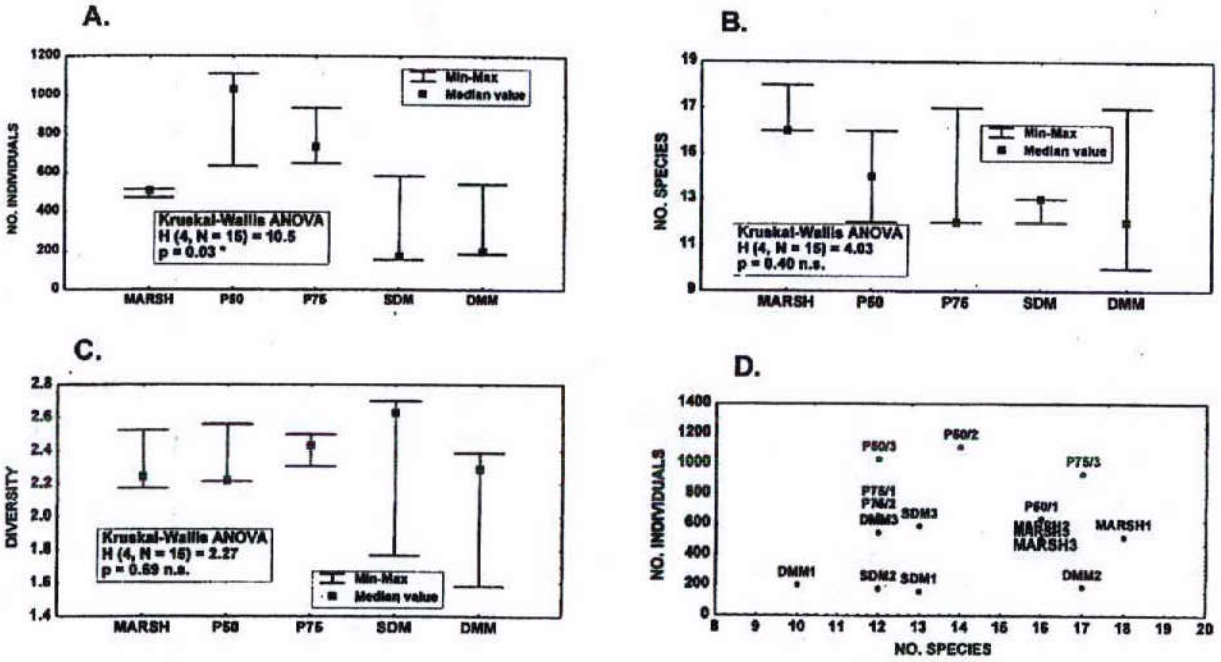
DOC#614

FIGURE 11. RAREFACTION CURVES FOR FISHES BY COVER TYPE



DOC#614

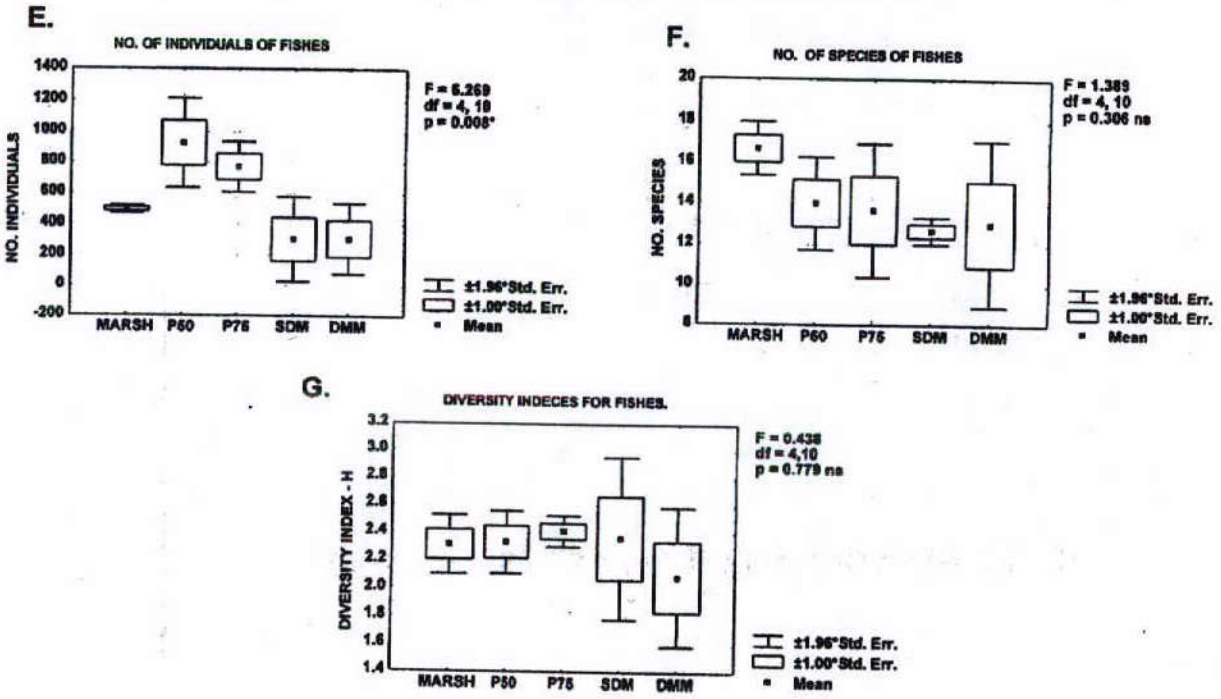
FIGURE 12A. - D.
FISHES - ABUNDANCE, RICHNESS, AND DIVERSITY



Drift fence data - 2 year cumulatives

DOC#614

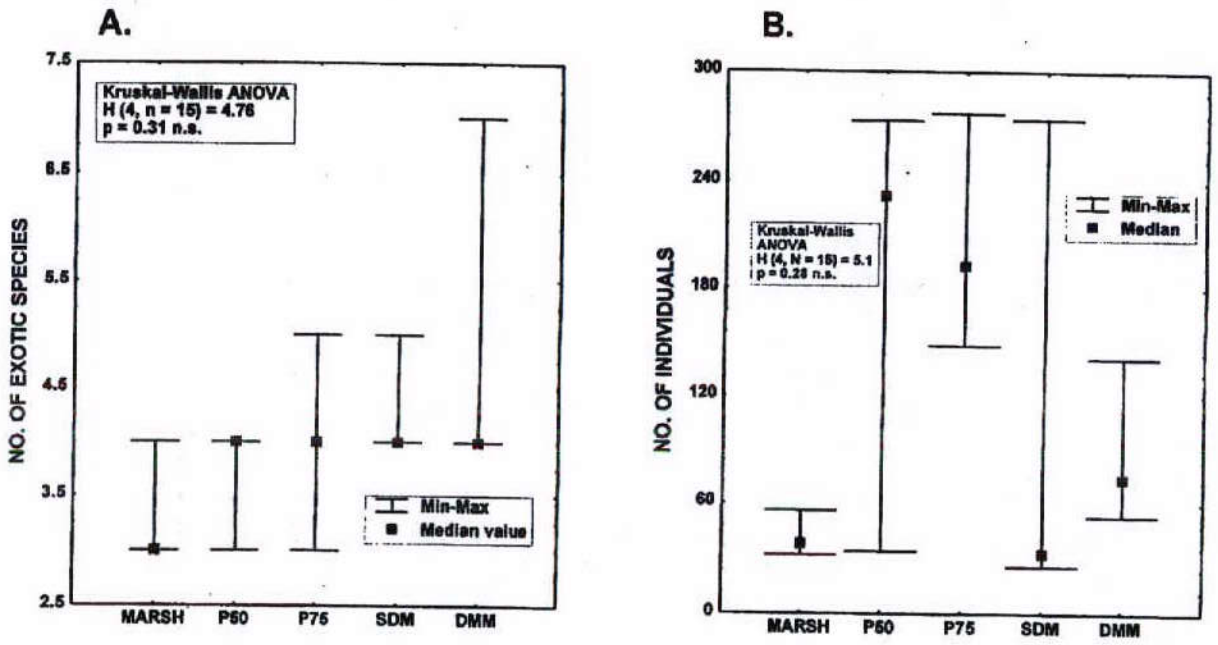
FIGURE 12E. - G.
FISHES - ABUNDANCE, RICHNESS, AND DIVERSITY



2 YEAR CUMULATIVES - DRFIT FENCE DATA

DOC#6 1 4

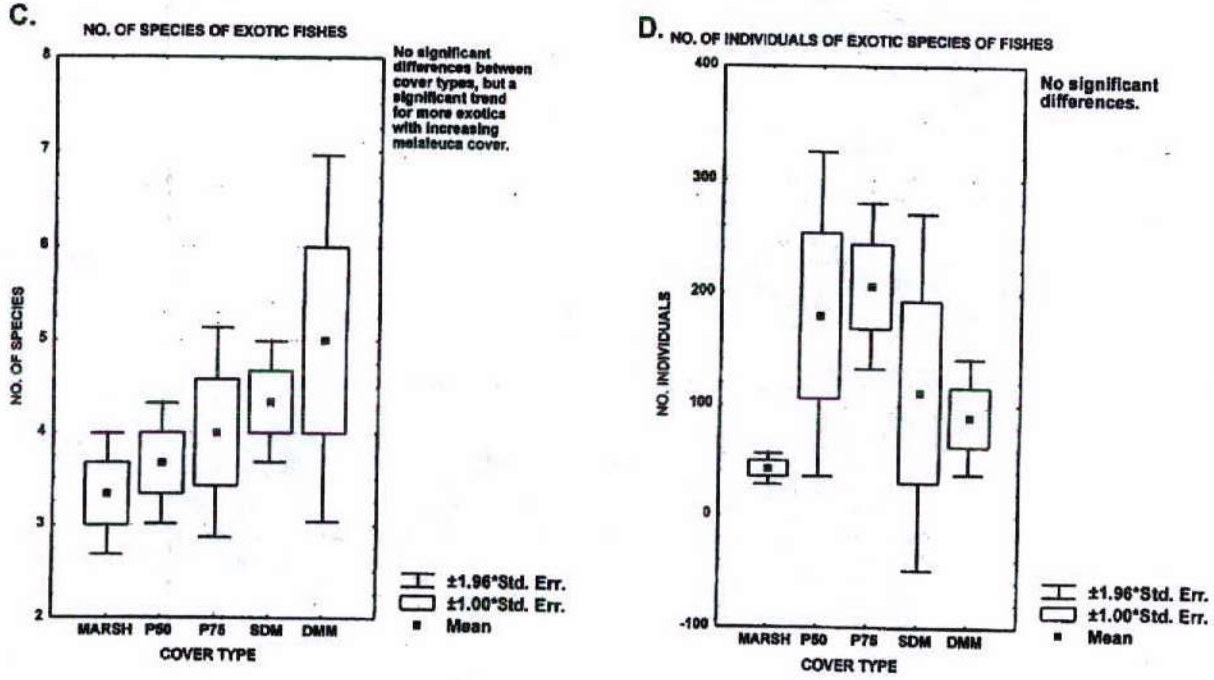
FIGURE 13A. - B.
EXOTIC SPECIES OF FISHES - RICHNESS AND ABUNDANCE



Drift fence data - 2 year cumulatives

DOC#614

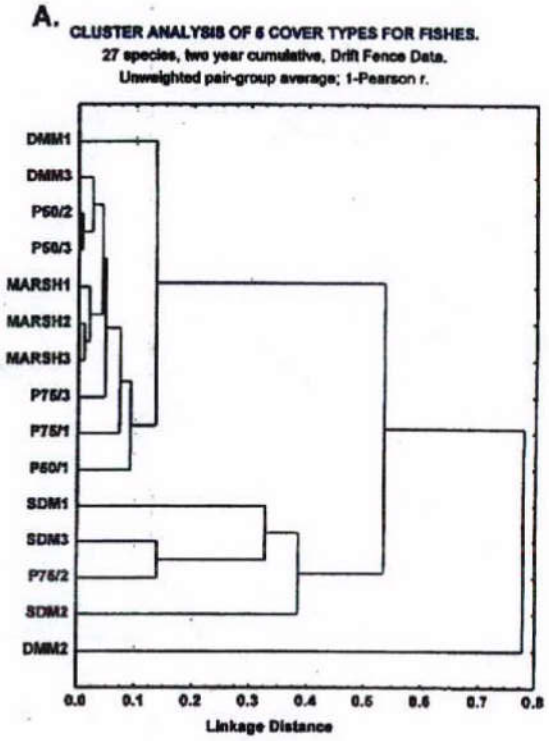
FIGURE 13C. - D.
EXOTIC SPECIES OF FISHES - RICHNESS AND ABUNDANCE

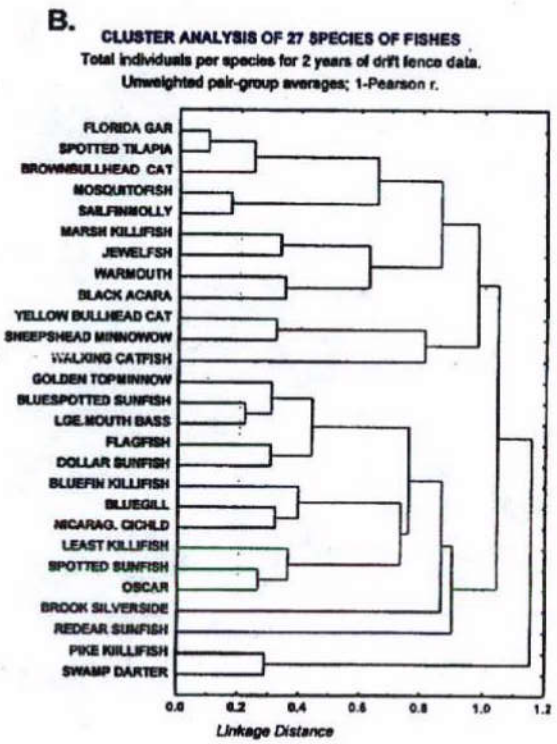


2 YEAR CUMULATIVES - DRFIT FENCE DATA

DOC#614

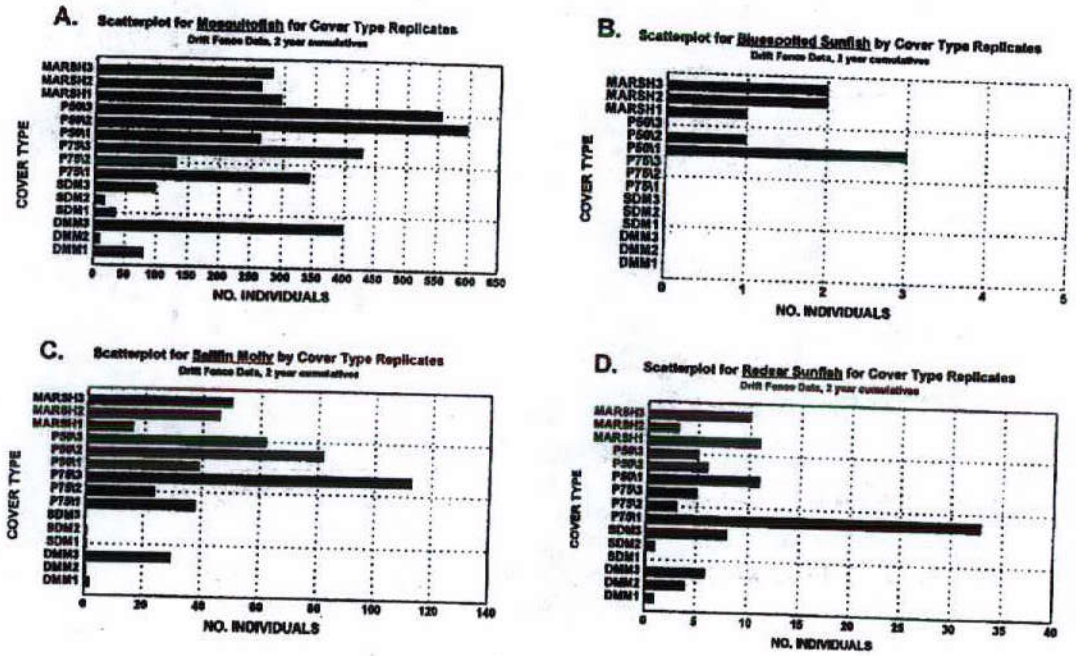
FIGURE 14. FISHES - CLUSTER ANALYSES





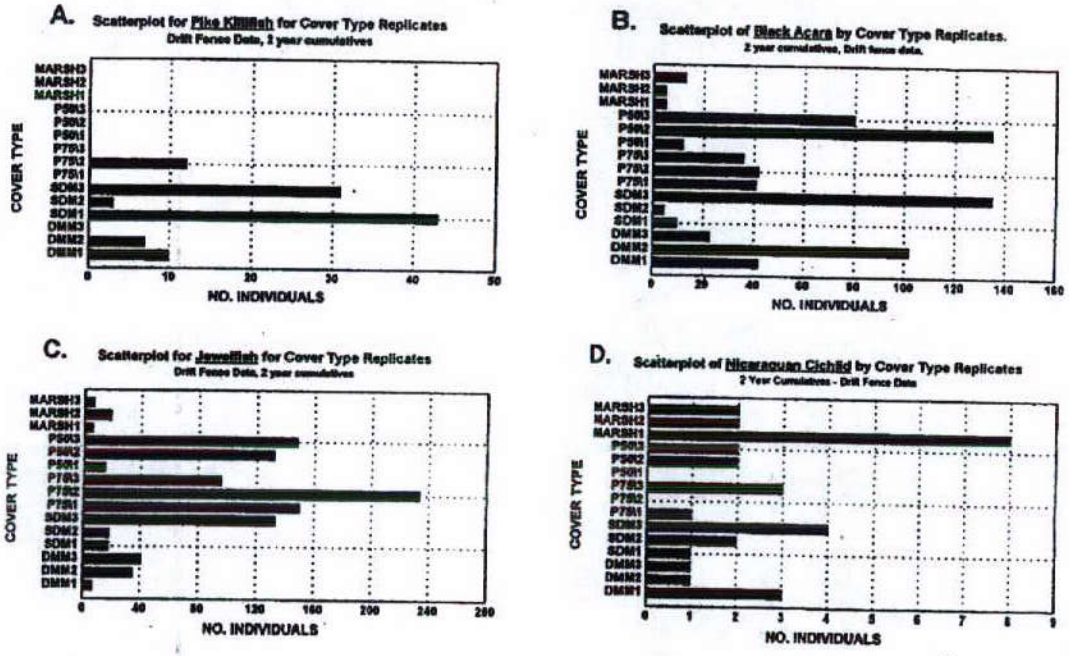
DOC#614

FIGURE 15. DISTRIBUTIONS OF SELECTED NATIVE FISHES BY COVER TYPE



DOC#614

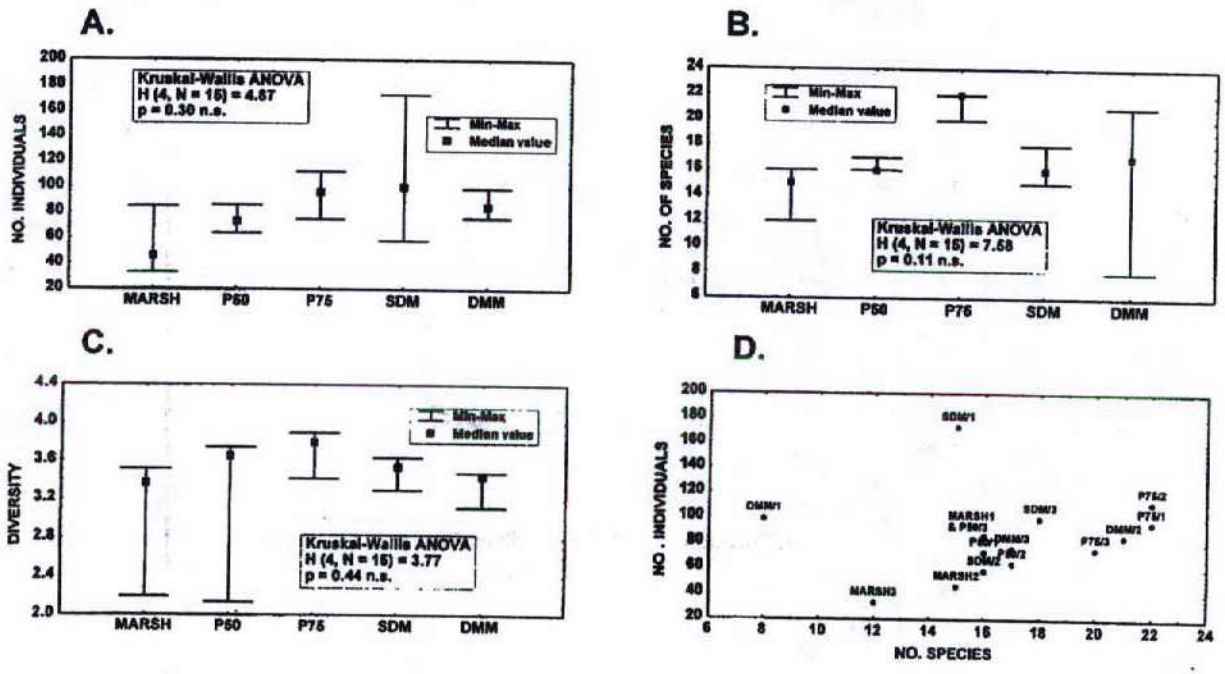
FIGURE 16.
DISTRIBUTIONS OF SELECTED EXOTIC FISHES BY COVER TYPE



722

DOC#614

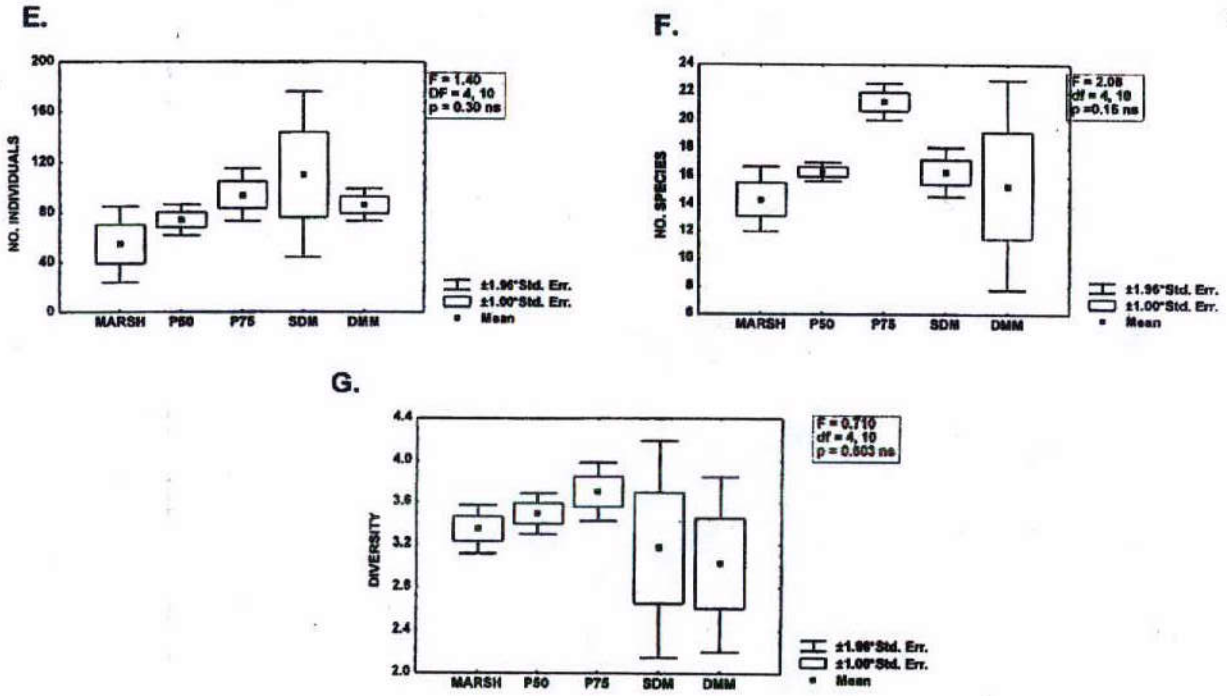
FIGURE 17A. - D.
AMPHIBIANS AND REPTILES - ABUNDANCE, RICHNESS, AND DIVERSITY



Drift fence data - 2 year cumulatives

DOC#614

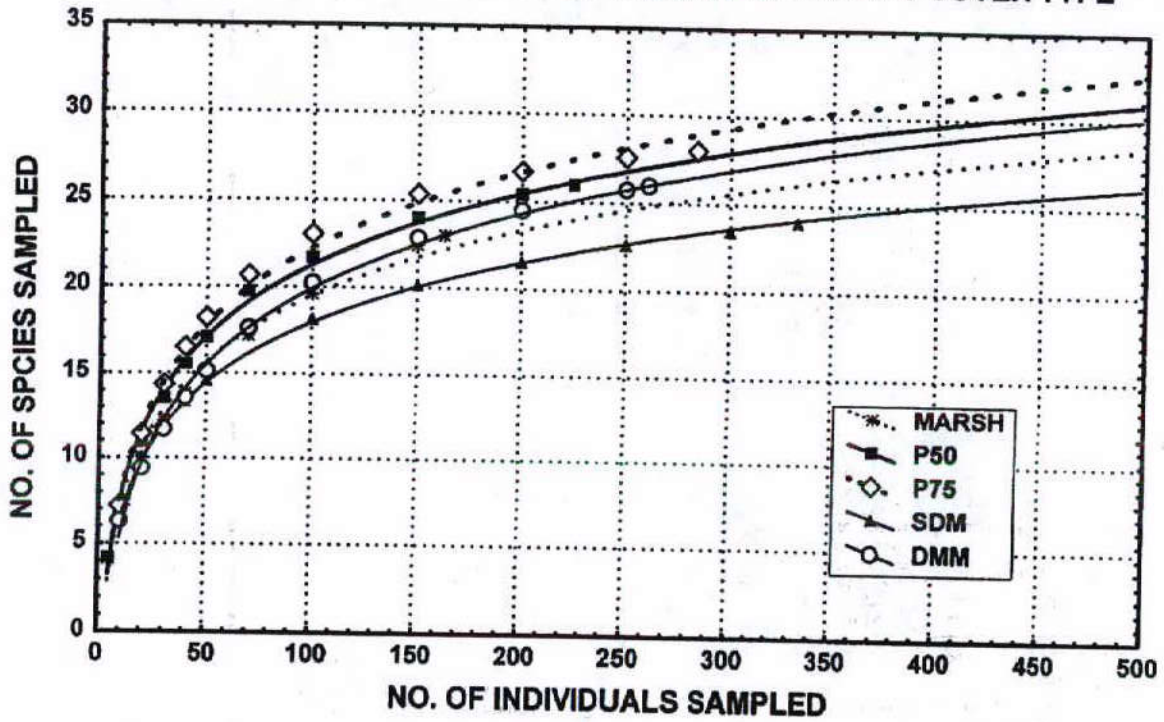
FIGURE 17E. - G.
AMPHIBIANS AND REPTILES



2 YEAR CUMULATIVES - DRIFT FENCE DATA

DOC#614

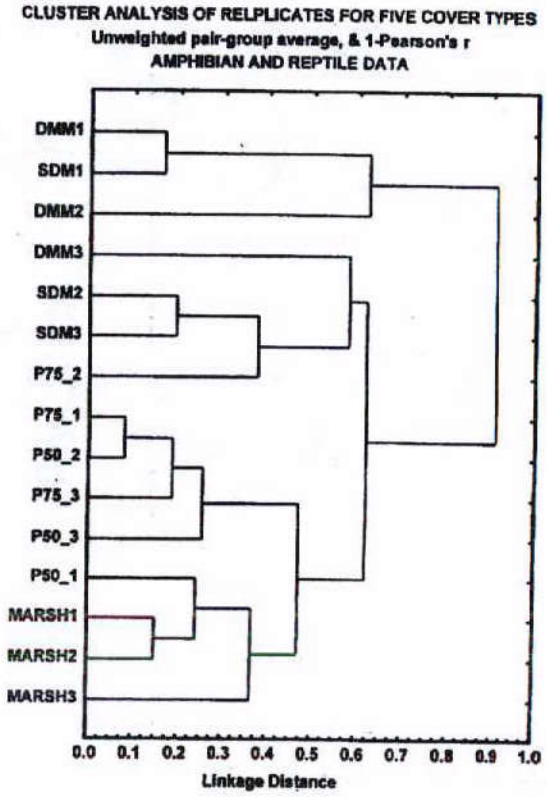
FIGURE 18. RAREFACTION CURVES FOR HERPTILES BY COVER TYPE



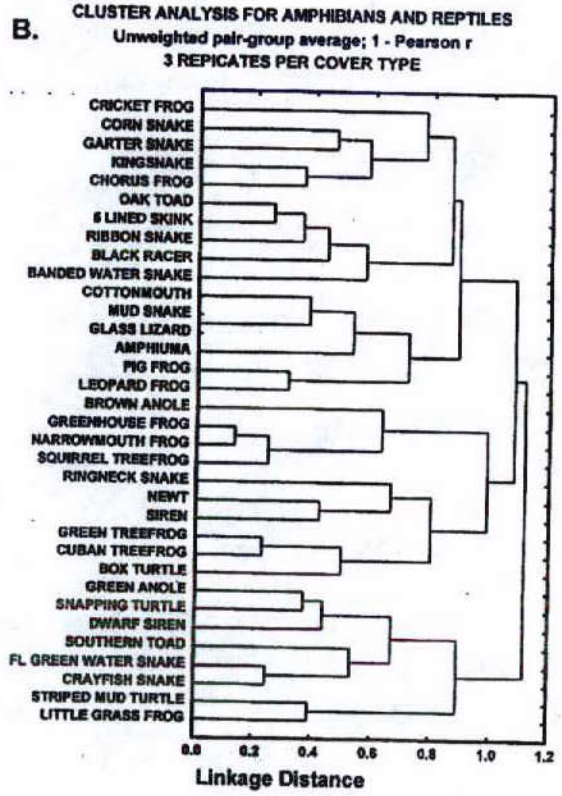
DOC#614

FIGURE 19.

A.

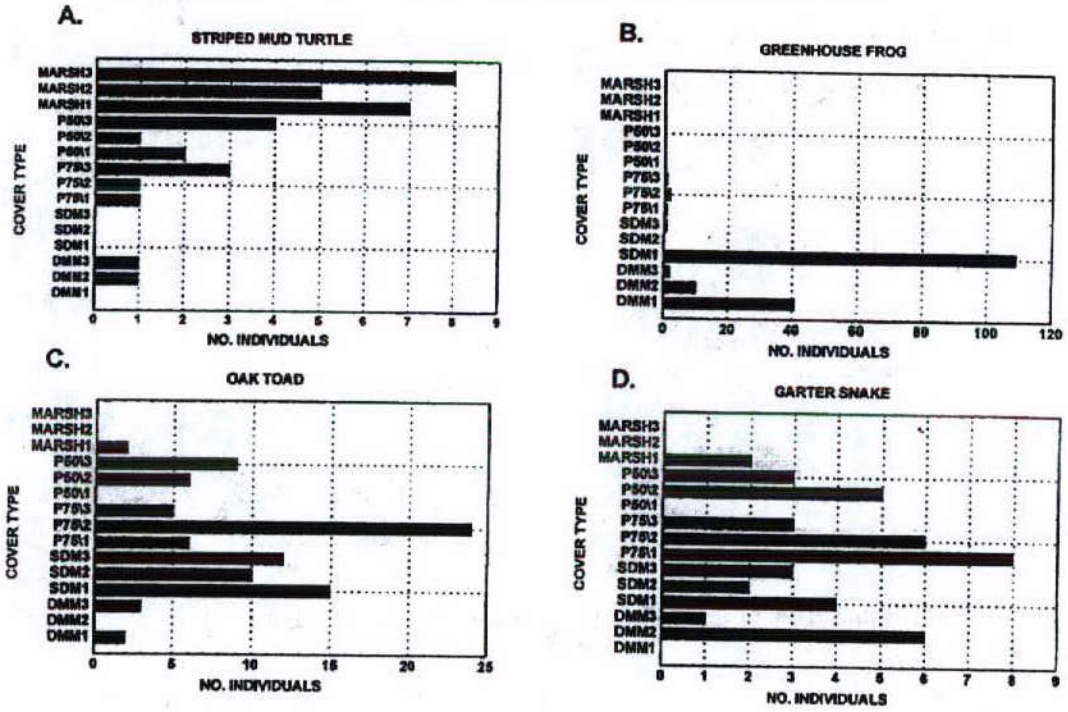


B.



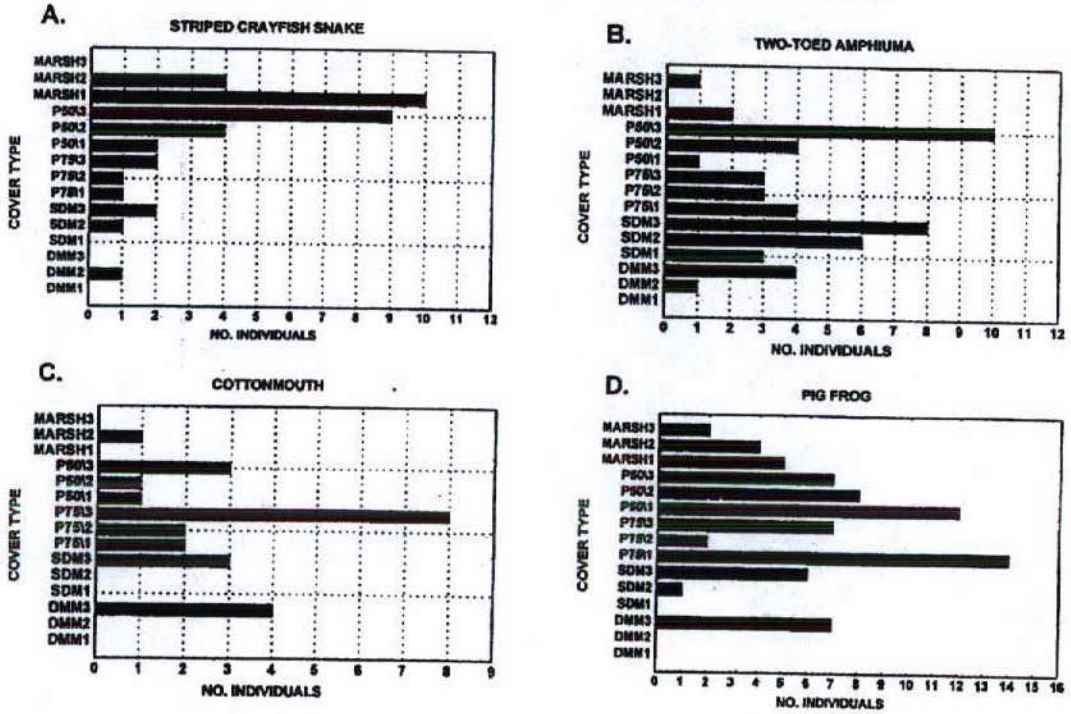
DOC#614

FIGURE 20.
DISTRIBUTIONS OF SELECTED HERPTILES BY COVER TYPE



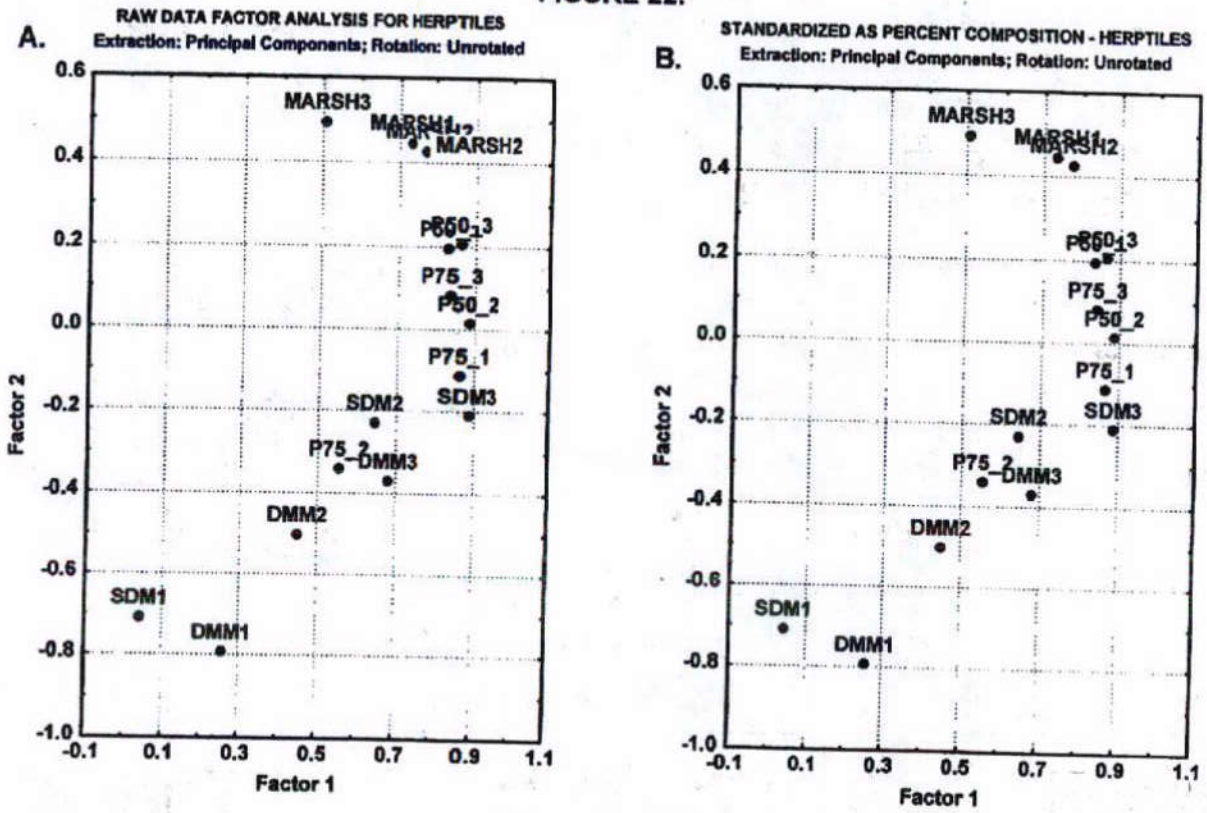
DOC#614

FIGURE 21.
DISTRIBUTIONS OF SELECTED HERPTILES BY COVER TYPE



DOC#614

FIGURE 22.



DOC#614

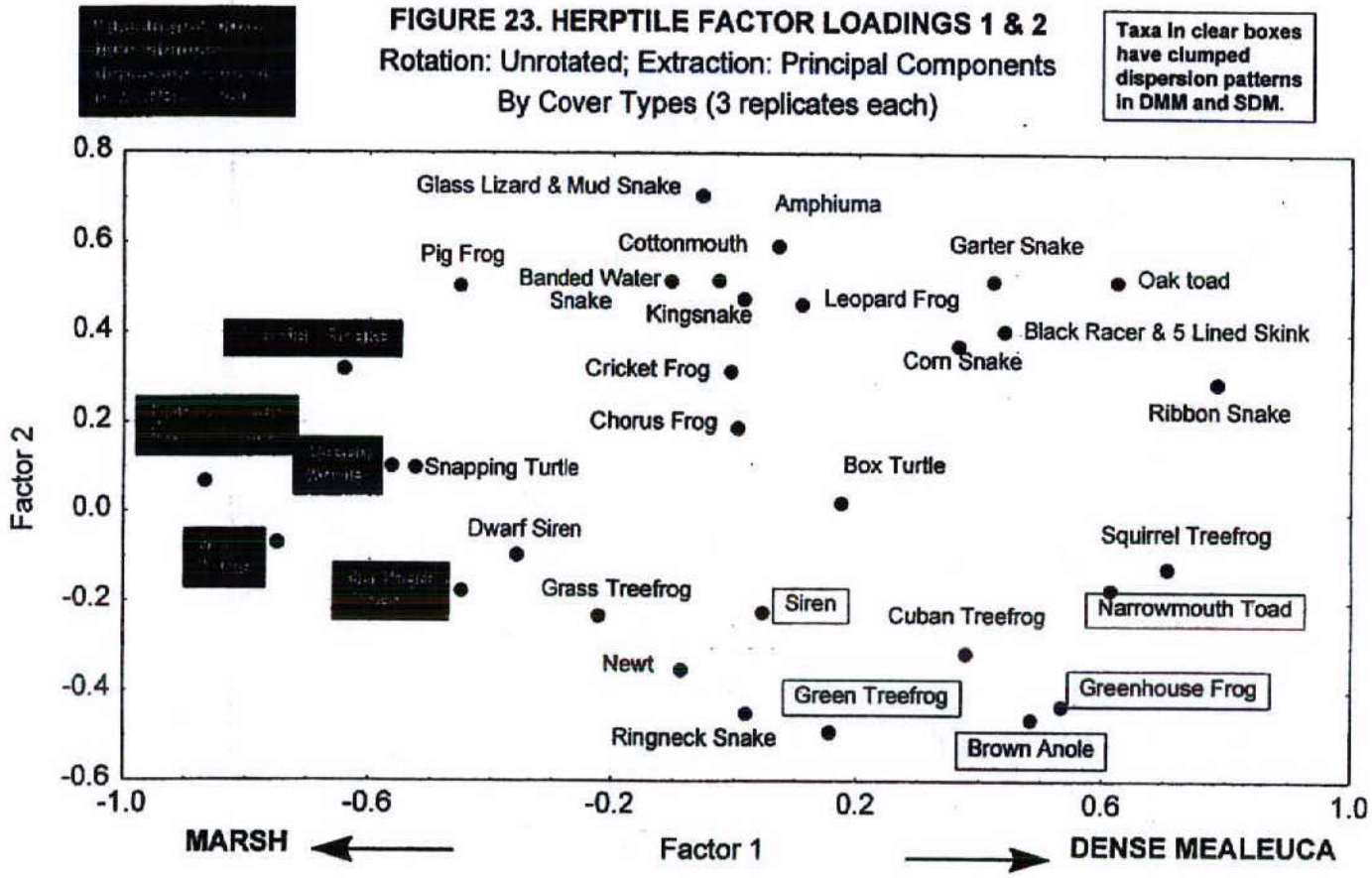


FIGURE 23. HERPTILE FACTOR LOADINGS 1 & 2
Rotation: Unrotated; Extraction: Principal Components
By Cover Types (3 replicates each)

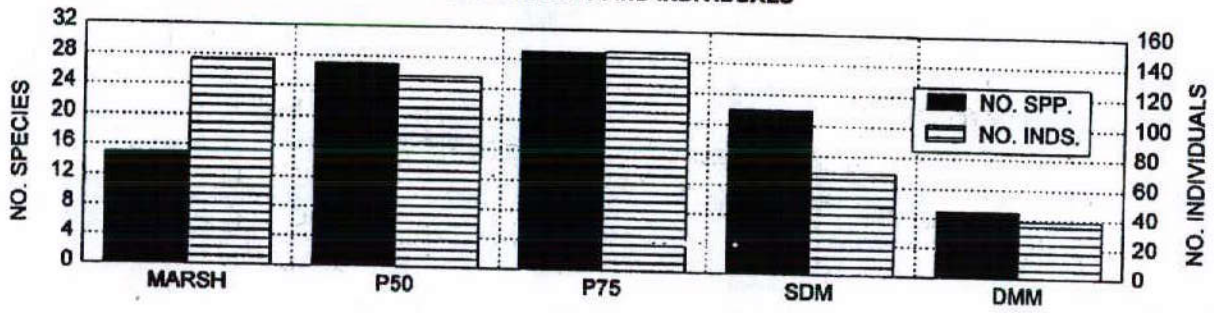
Taxa in clear boxes have clumped dispersion patterns in DMM and SDM.

DOC#614

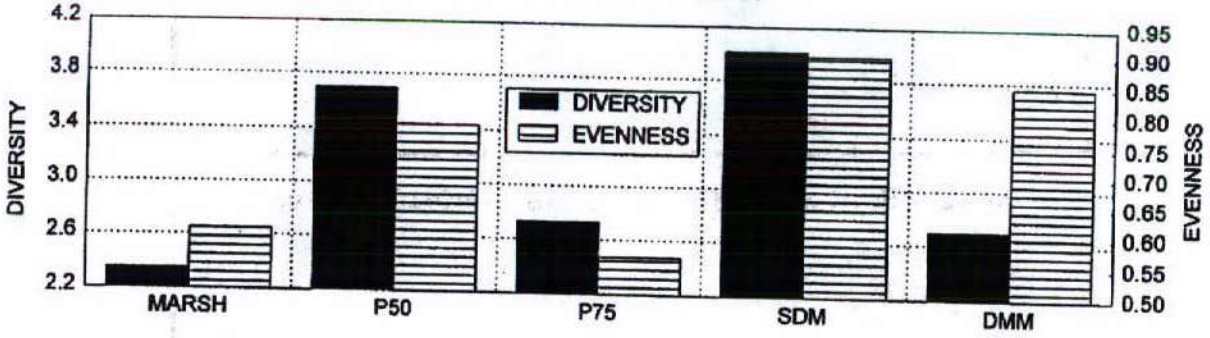
FIGURE 24. BIRD DATA FROM TRANSECTS FOR 5 COVER TYPES

TWO YEAR CUMULATIVES

A. NO. SPECIES AND INDIVIDUALS

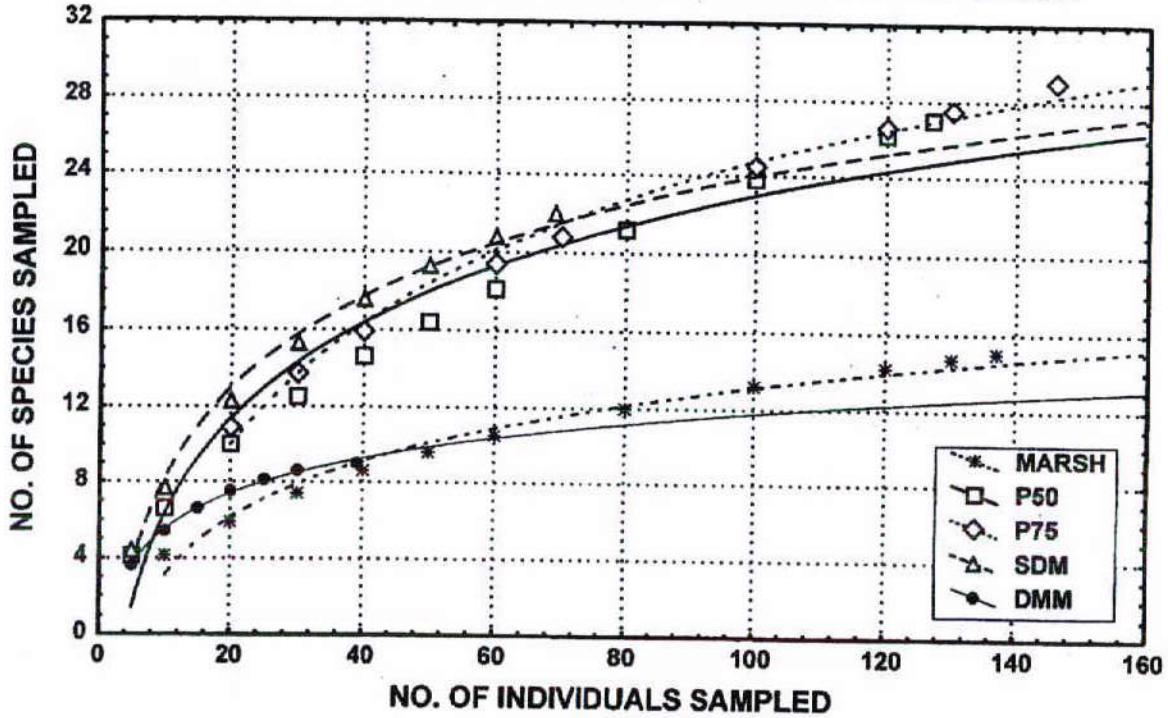


B. DIVERSITY AND EVENNESS



DOC#614

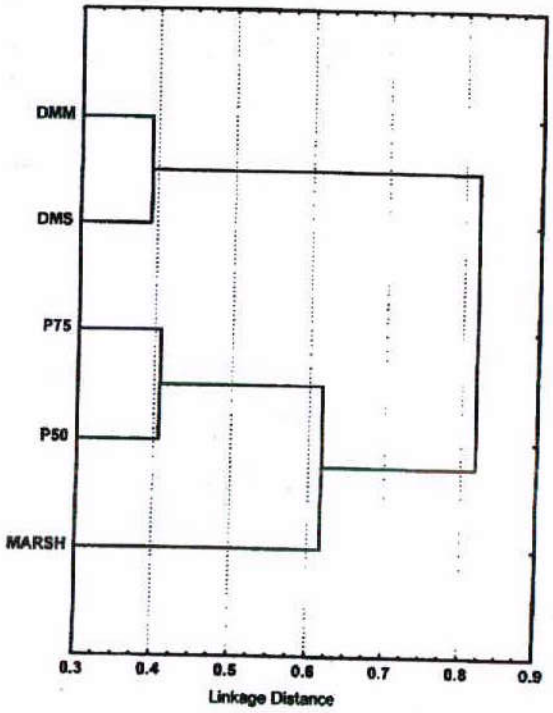
FIGURE 25. RAREFACTION CURVES FOR BIRDS BY COVER TYPE



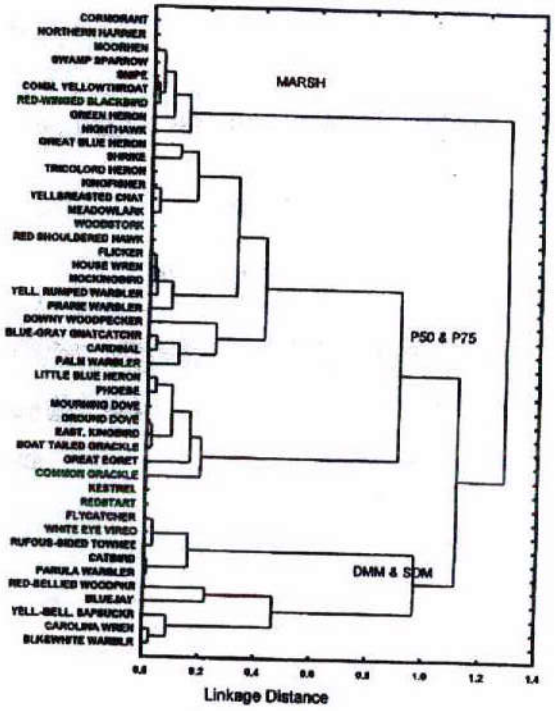
DOC#614

FIGURE 26.

A. CLUSTER ANALYSIS OF 46 BIRD SPECIES BY COVER TYPES
Unweighted pair-group average; 1-Pearson's r.
Based on bird transect data only, two year totals.

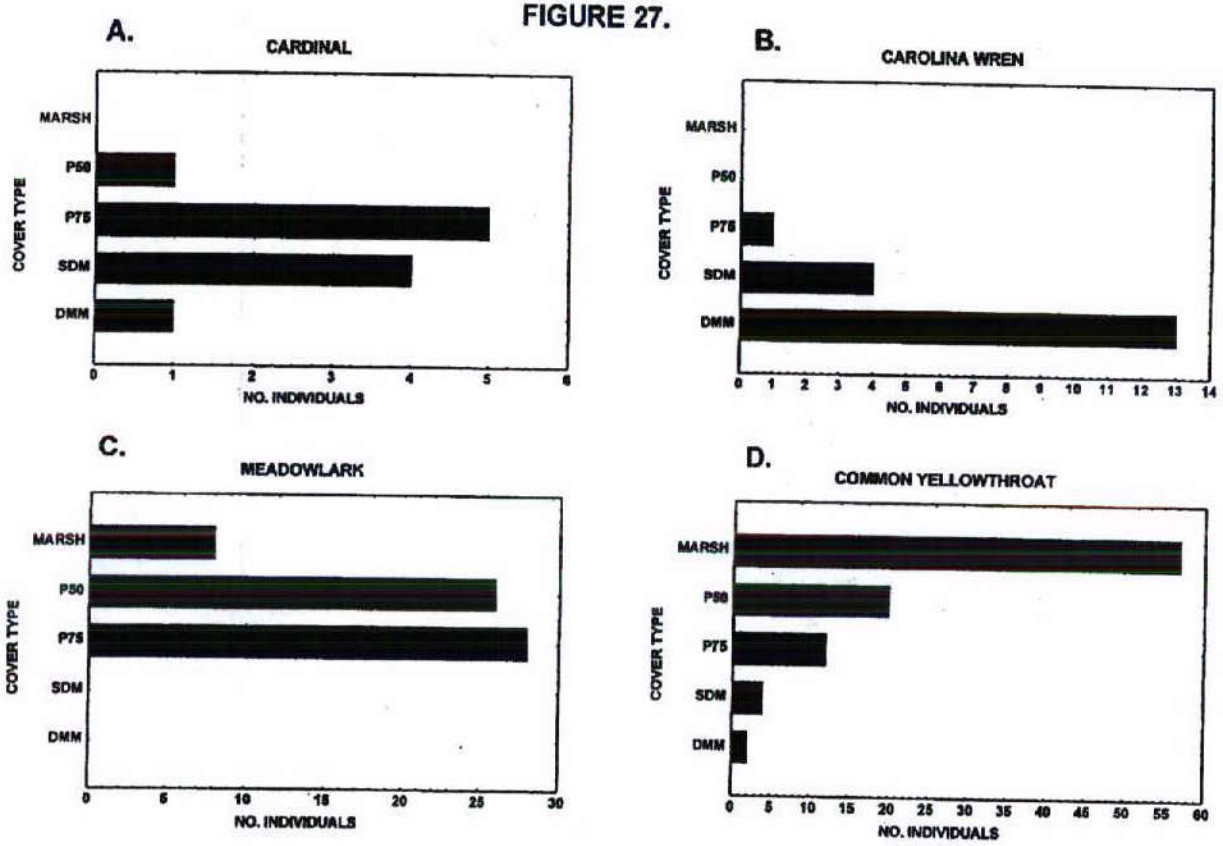


B. CLUSTER ANALYSIS FOR 46 BIRD SPECIES
TRANSECT DATA ONLY, IN 5 COVER TYPES
Unweighted pair-group averages; 1-Pearson r.



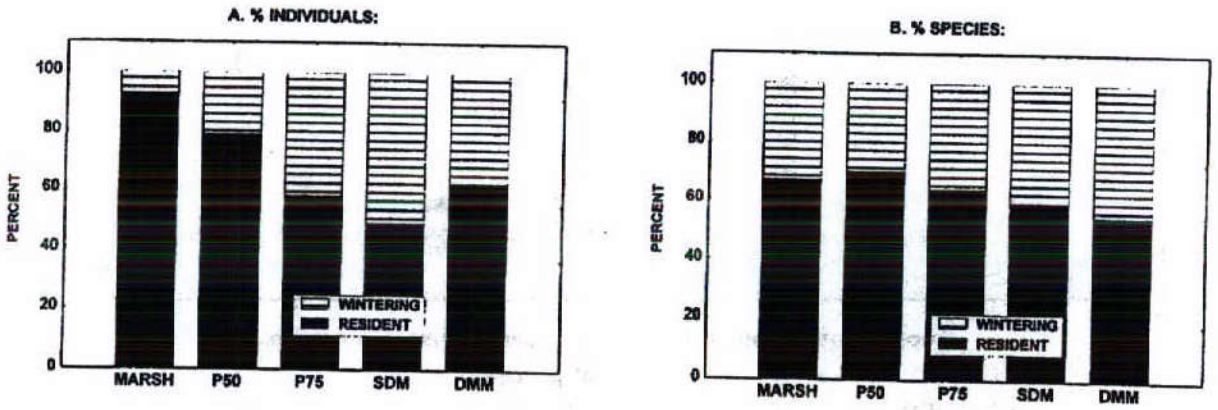
DOC#614

FIGURE 27.



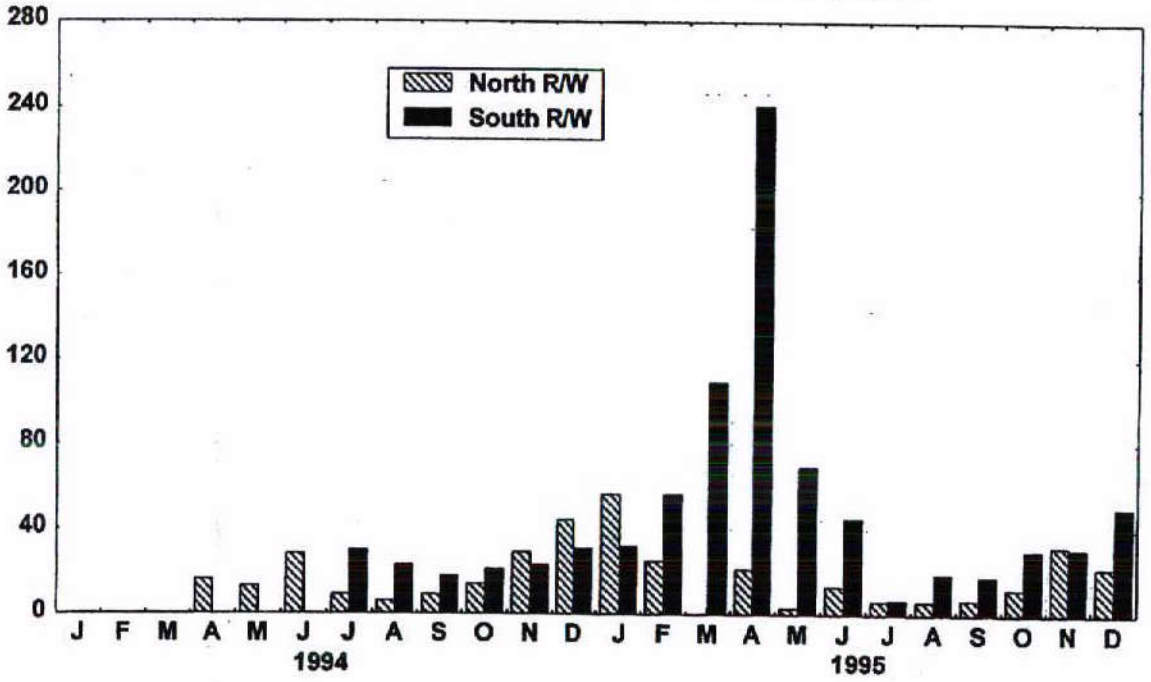
DOC#614

FIGURE 28. RESIDENT VS. WINTERING BIRDS IN 5 COVER TYPES.
PERCENT COMPOSITION BY INDIVIDUALS AND SPECIES.



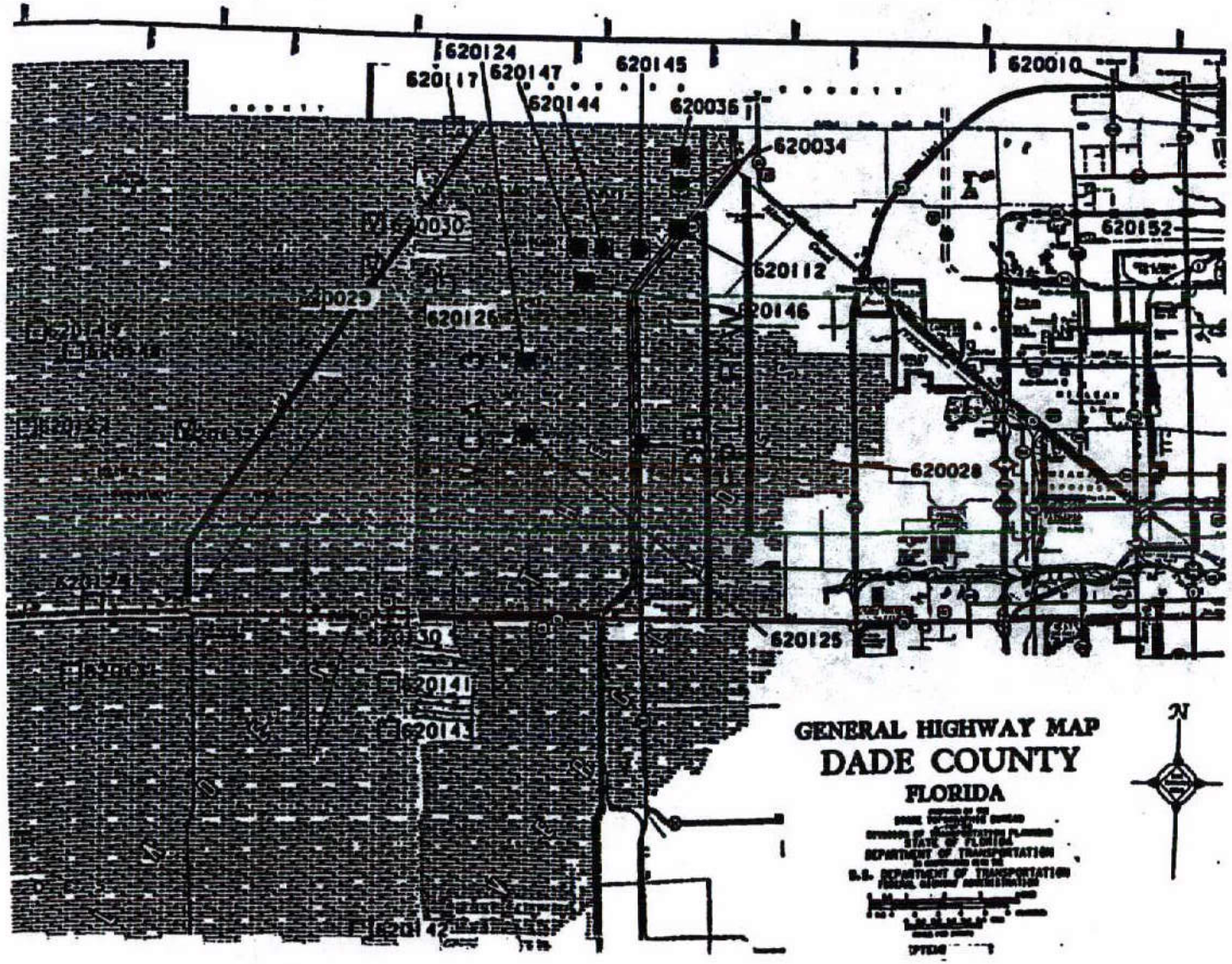
DOC#614

FIGURE 29. MONTHLY WADING BIRD COUNTS FROM ROAD SURVEYS
FPL RIGHT OF WAY
Pennsuco Canal divides R/W into North and South portions



DOC#614

Figure 30. Approximate locations of wading bird rookeries in Water Conservation Area (WCA) 3. Solid symbols represent rookeries within 10 km of the FPL Right-of-Way. Figure adapted from Runde et al., 1991.



DOC#6614

Figure 31A. Carolina wren nest in the peeling outer bark of a mature melaleuca tree at DMM-6 site.

Figure 31B. Woodpecker cavities in a melaleuca snag. Photograph taken near site P50-3.

FIGURE 32. MAMMALS BY COVER TYPE

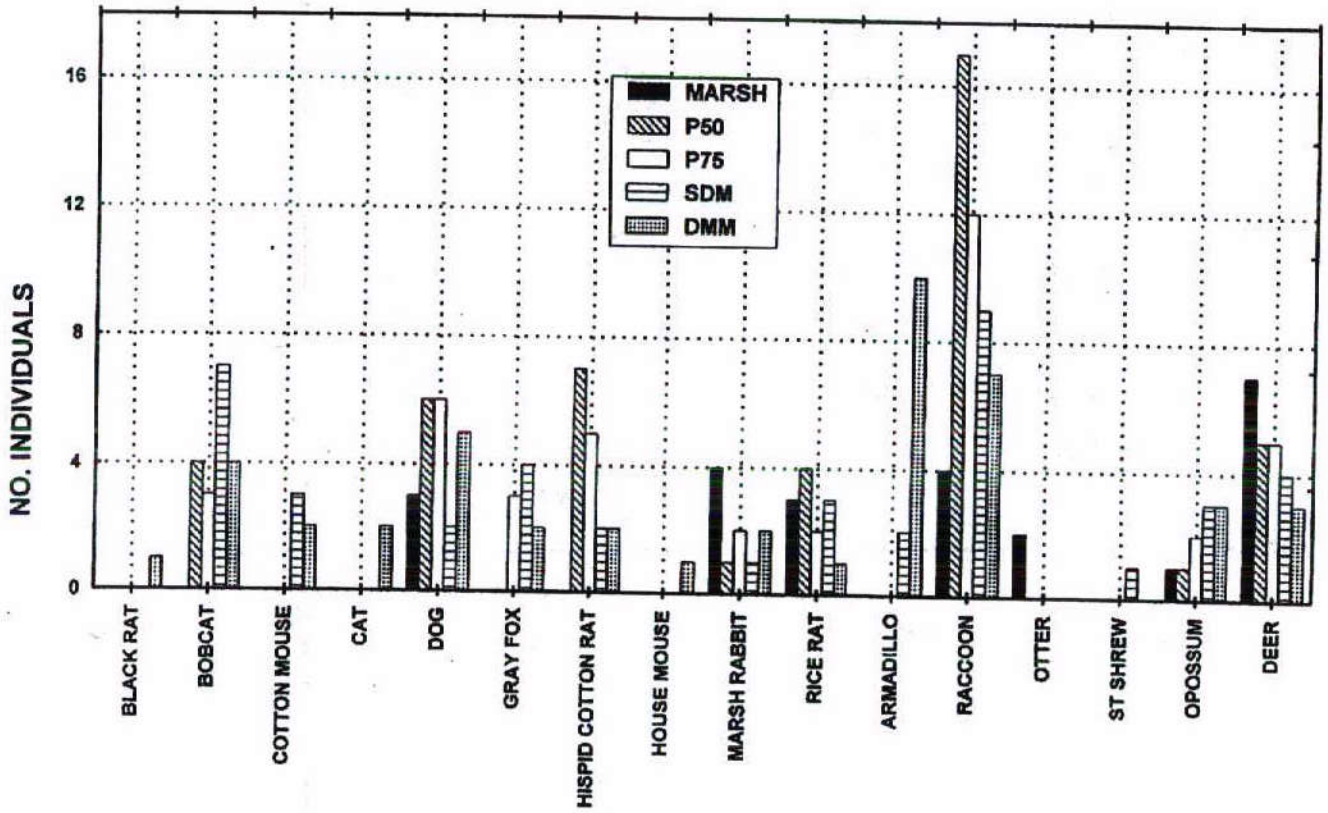


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FIGURE 33. MAMMALS BY COVER TYPE
24 MONTHS - ALL METHODS

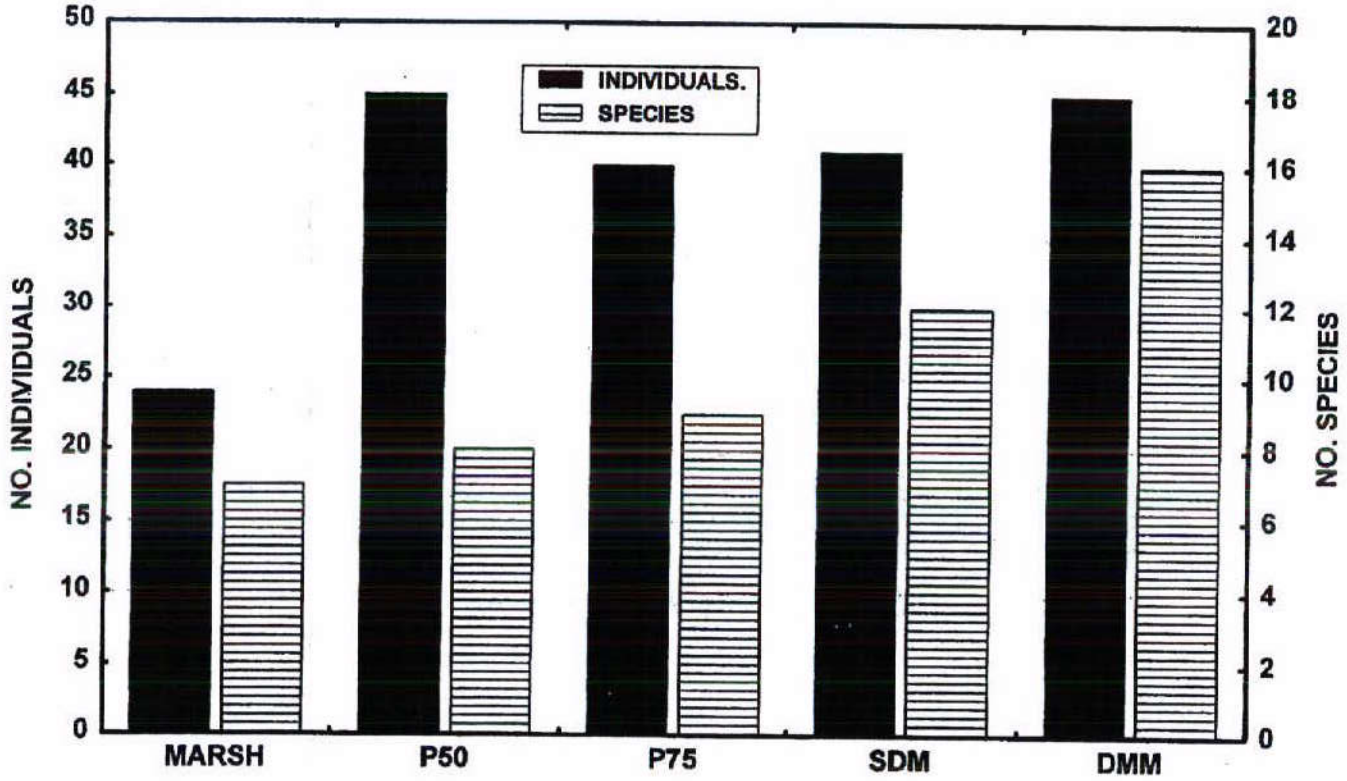

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FIGURE 34. CLUSTER ANALYSES FOR MAMMALS IN 5 COVER TYPES
2 YEAR CUMULATIVE DATA SET - ALL METHODS
Unweighted pair-group method; 1 - Pearson r.

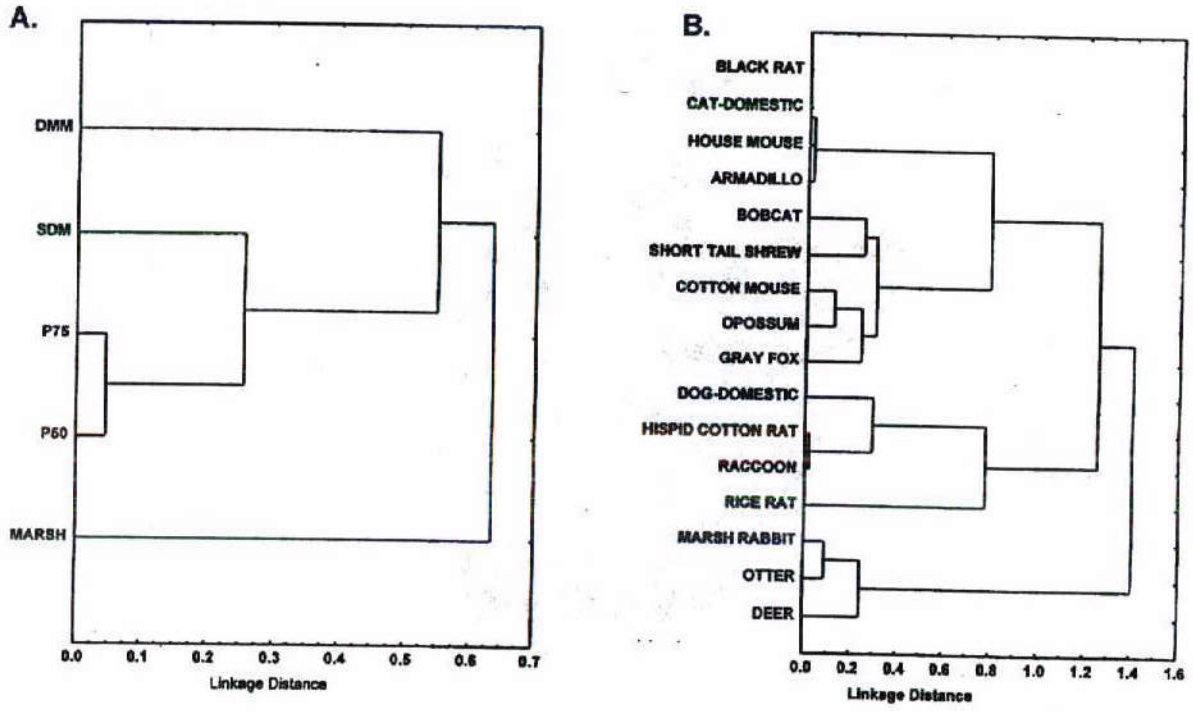

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FIGURE 35 Number of active RIFA mounds by cover type for each quarter

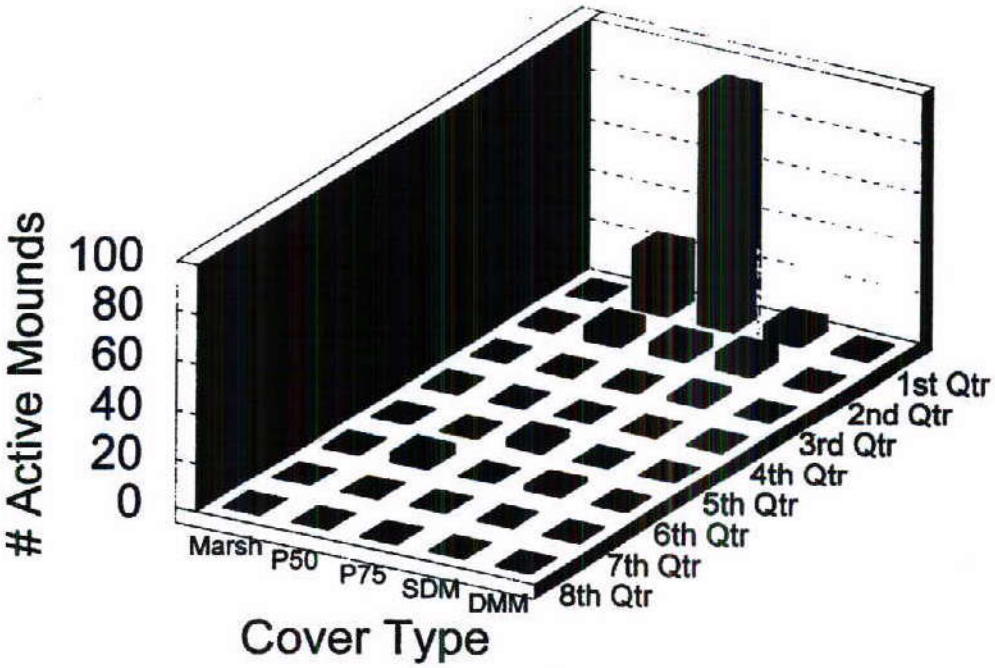
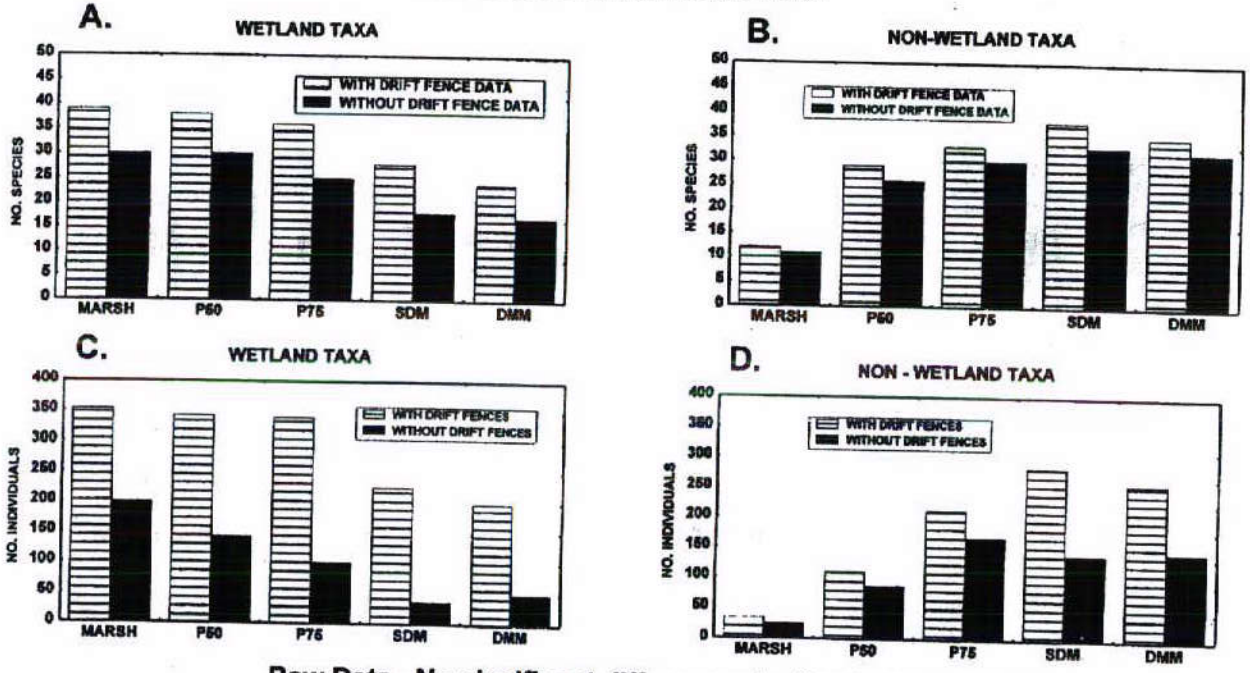


FIGURE 36A. - D. TRENDS IN WETLAND AND NON-WETLAND TAXA WITH AND WITHOUT DRIFT FENCE DATA INCLUDED

FISHES EXCLUDED IN ALL ANALYSES



Raw Data - No significant differences in distributions with & without drift fence data, Kolmogrov-Smirnov test p's > 0.05.

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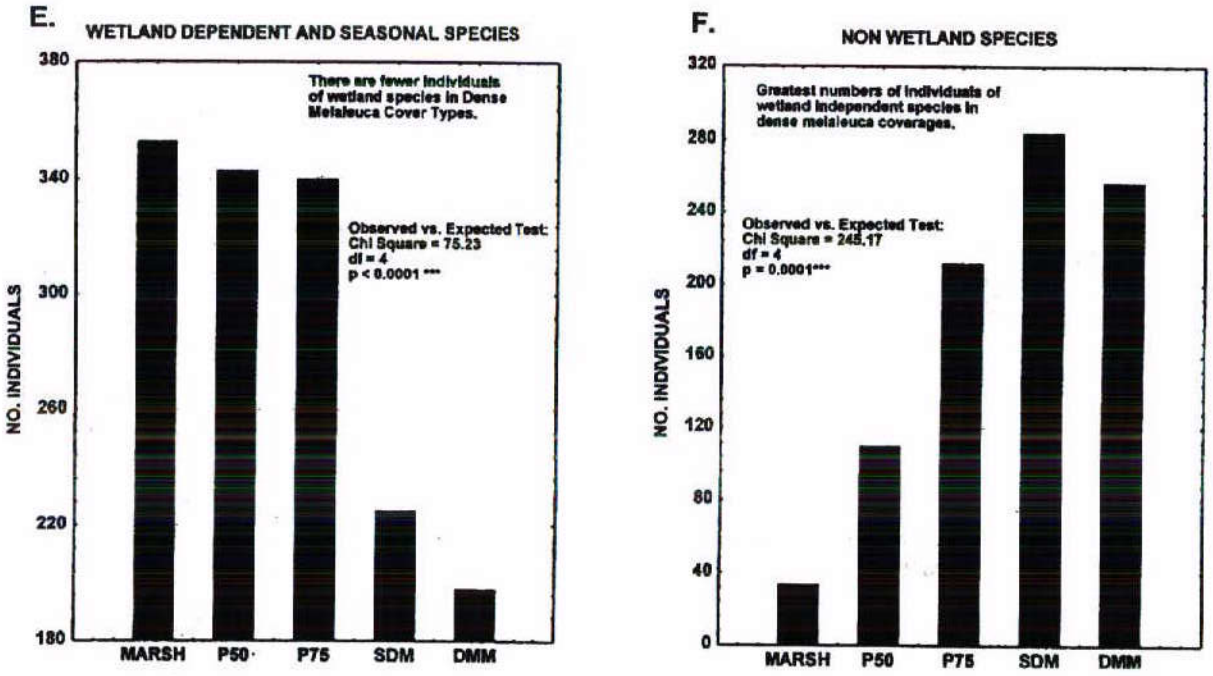
FIGURE 36E. - F.
NO. OF INDIVIDUALS OF WETLAND DEPENENT & SEASONAL VS. NON WETLAND TAXA
AMPHIBIANS, REPTILES, BIRDS, AND MAMMALS - ALL METHODS



FISHES EXCLUDED FROM ANALYSES.

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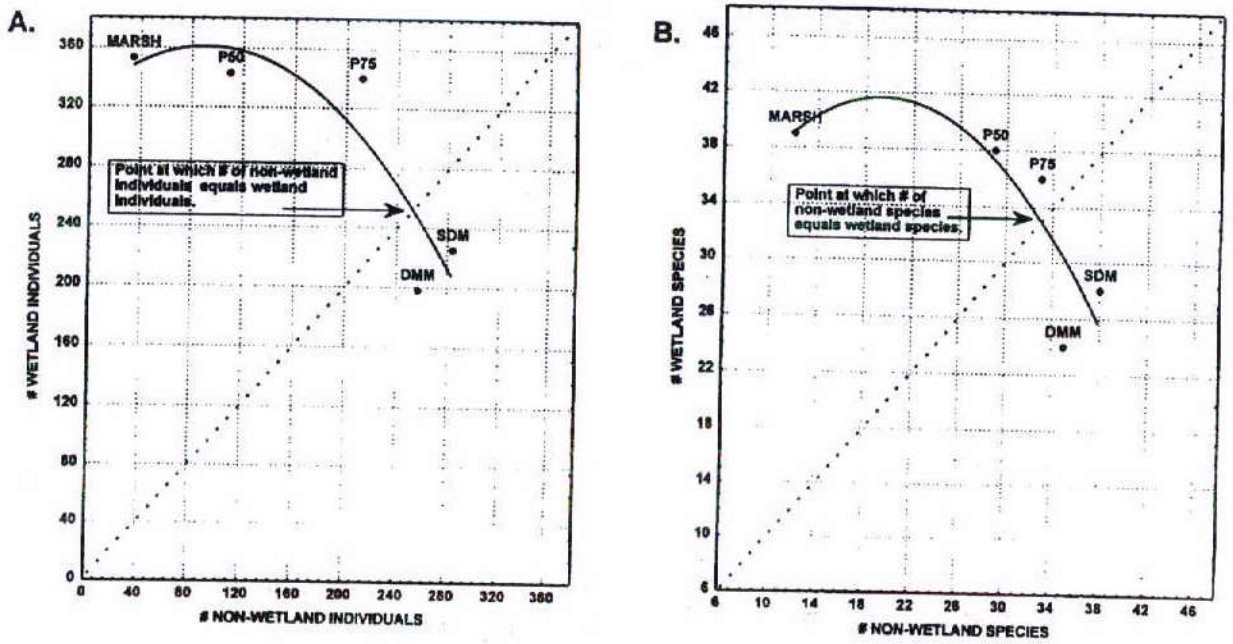
FIGURE 37. TRENDS IN WETLAND AND NON-WETLAND SPECIES AS MELALEUCA INVASION PROGRESSES.

1. - Initially species richness and abundance increase as non-wetland species, especially birds, are added to the community.
2. - Finally, richness and abundance decline, as wetland species become more rare.



FISHES EXCLUDED FROM ANALYSIS. DATA INCLUDES AMPHIBIANS, REPTILES, BIRDS, AND MAMMALS - ALL METHODS.

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FIGURE 38.
ABUNDANCE OF THREE RESIDENT BREEDING BIRD SPECIES IN 1994 & 1995
STRIP TRANSECT DATA FOR APRIL - SEPTEMBER OF EACH YEAR.

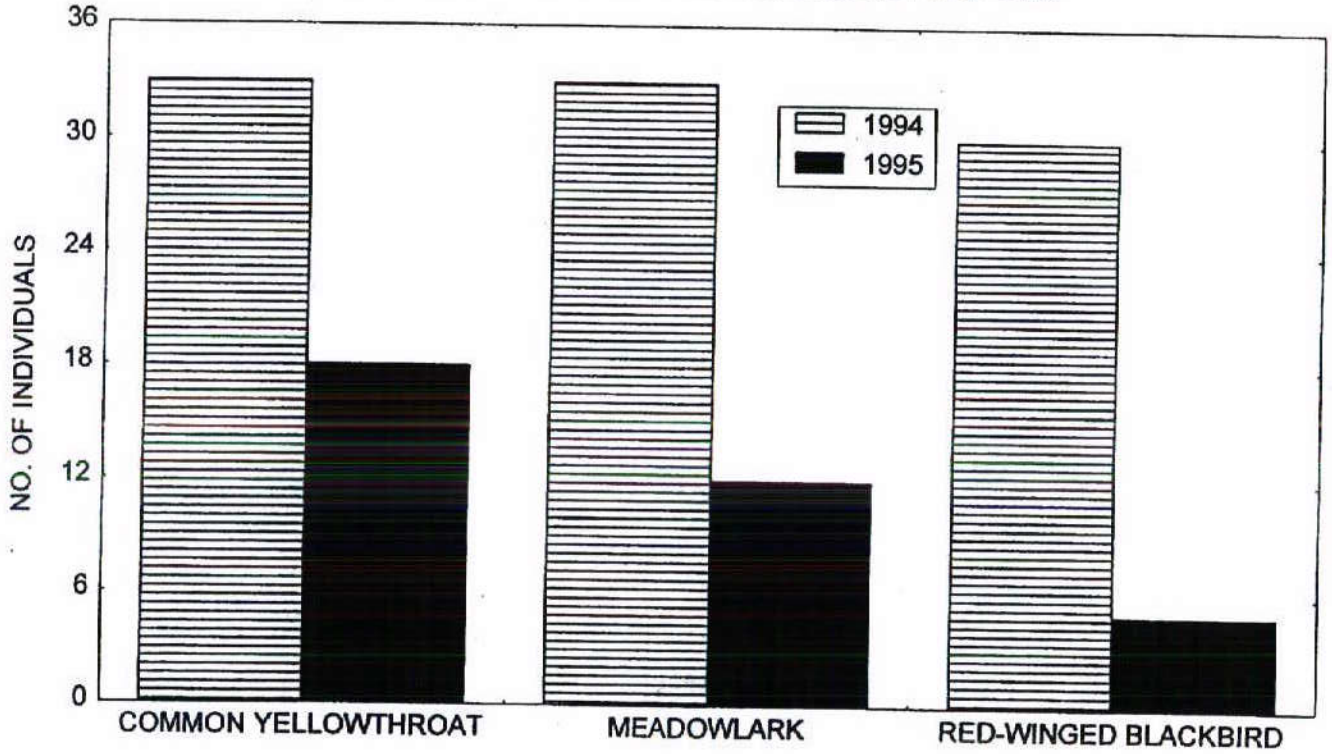

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FIGURE 39. Summary of changes in vegetation structural diversity and wildlife diveristy in native wetland habitats with increasing coverage by melaleuca.

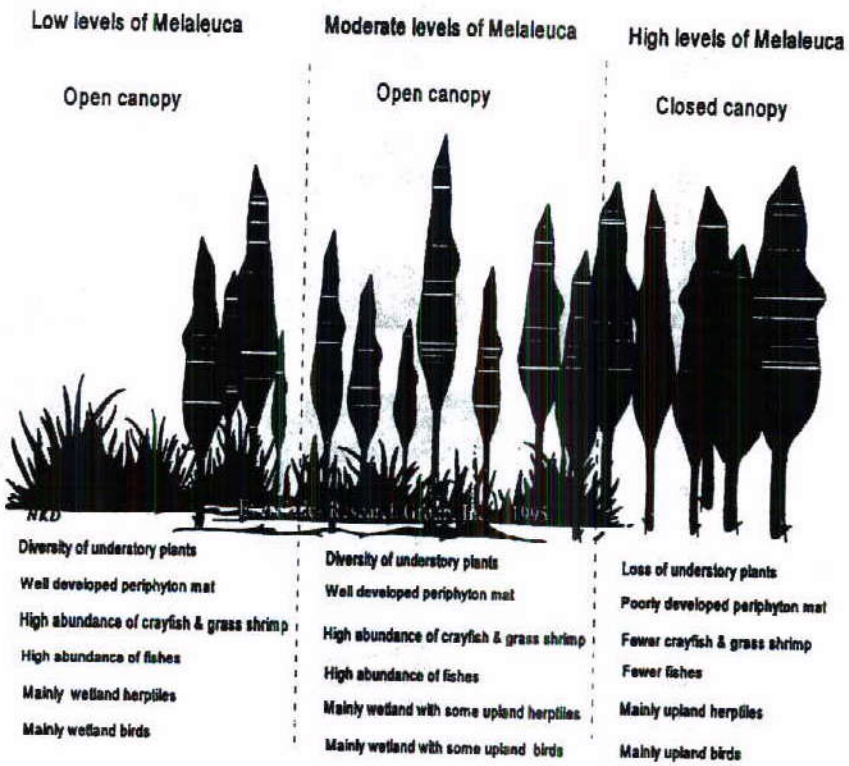

FIGURE 40.
PERCENT OF SPECIES IN MARSHES THAT OCCURED IN OTHER COVER TYPES

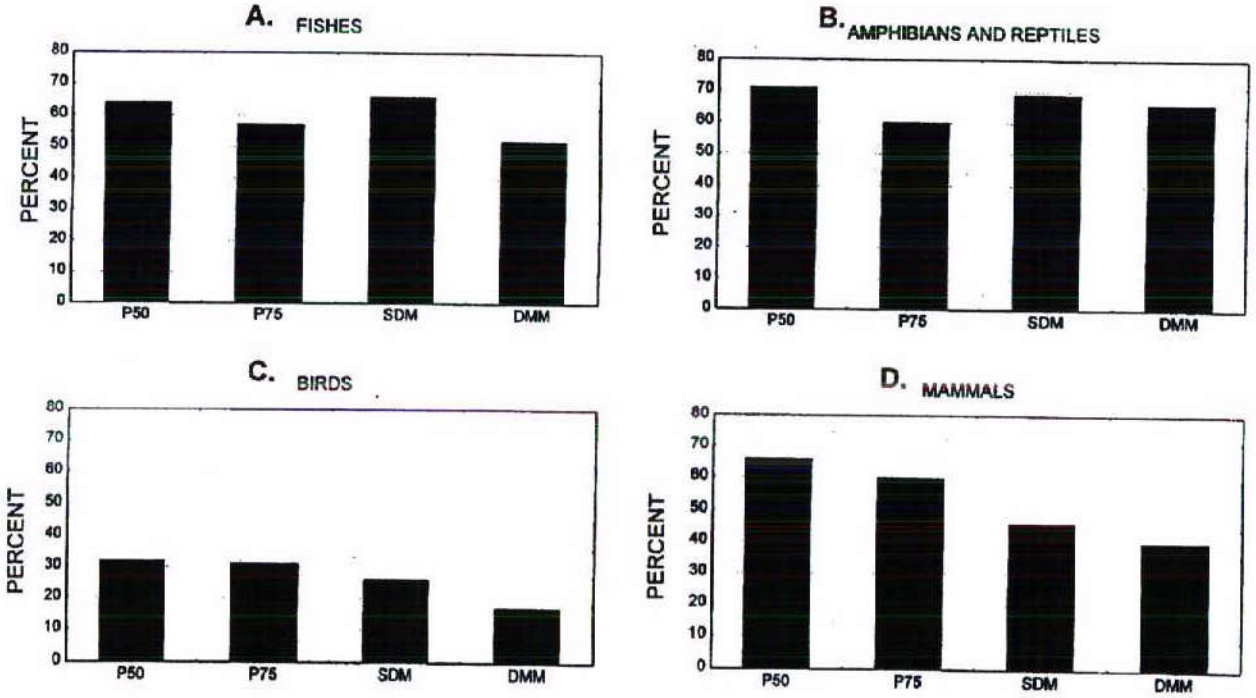

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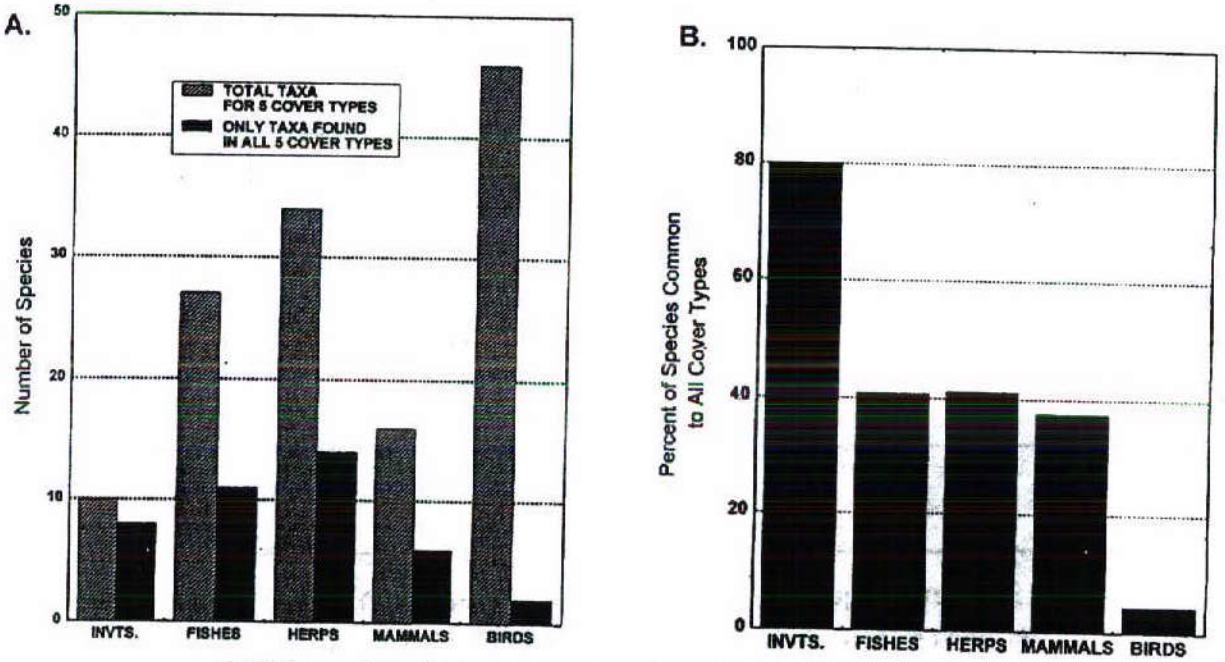
FIGURE 41. TOTAL TAXA AND TAXA COMMON TO ALL 5 COVER TYPES MARSHES - DENSE MELALEUCA.



Drift fence data for macroinvertebrates, fishes and herptiles.
Transect, trap, and stations for mammals. Transects for birds.

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FIGURE 42. CLUSTER ANALYSIS: PRESENCE (=1) or ABSENCE (=0) FOR 133 TAXA

Macroinvertebrates, Fishes, Herptiles, Birds, and Mammals.

Unweighted pair-group average; Percent disagreement.

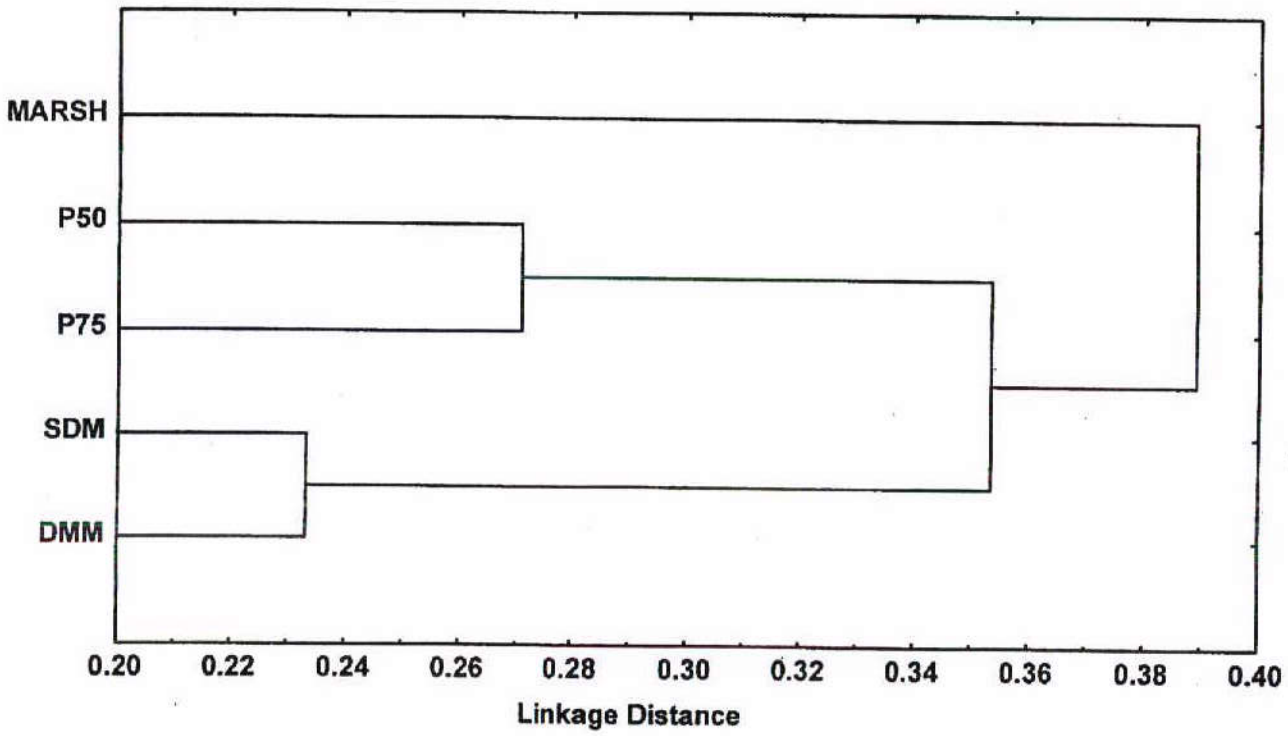

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FIGURE 43. SCATTERPLOT OF FACTOR LOADINGS- PRESENCE/ABSENCE DATA FOR 133 TAXA

Macroinvertebrates, Fishes, Herptiles, Birds & Mammals; Present = 1; Absent = 0.

Extraction: Principal components; Unrotated

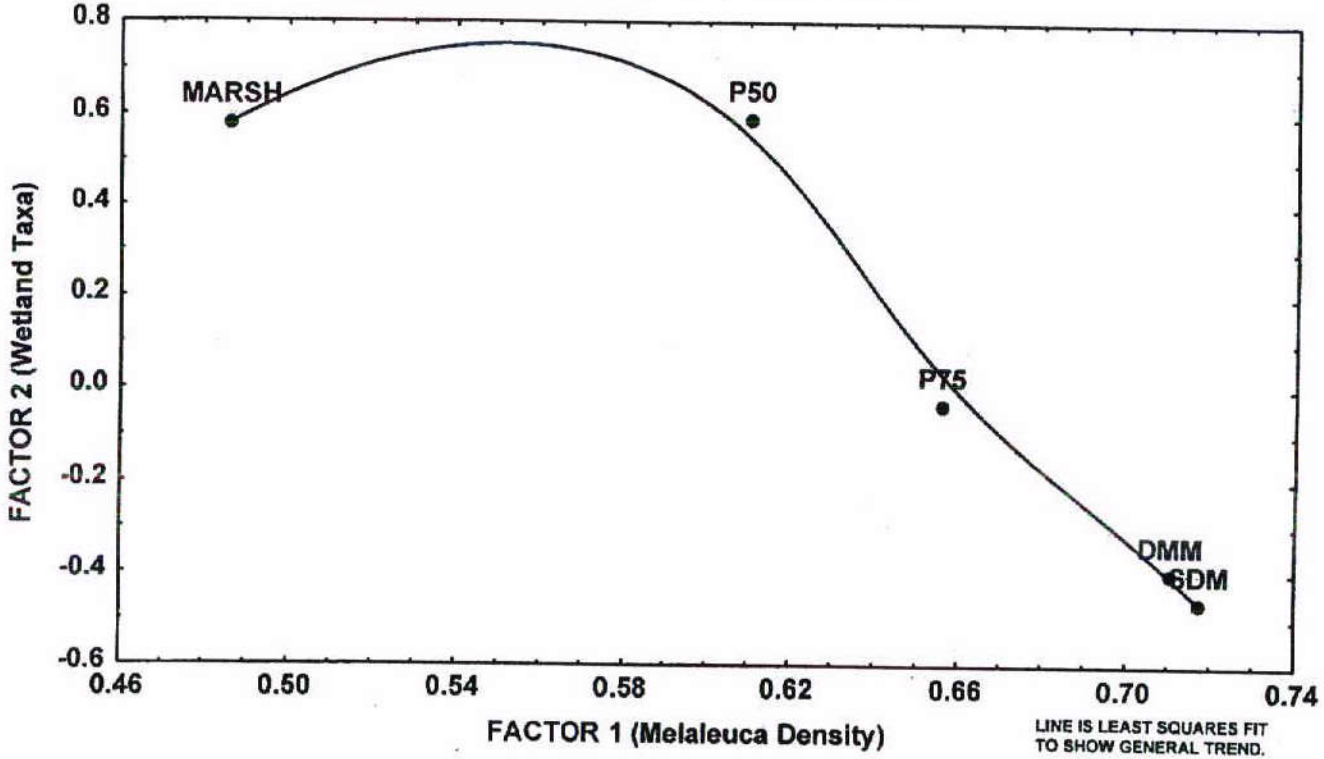

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FIGURE 44. A schematic drawing of habitat use by some typical wetland birds. FROM WELLER (1982).

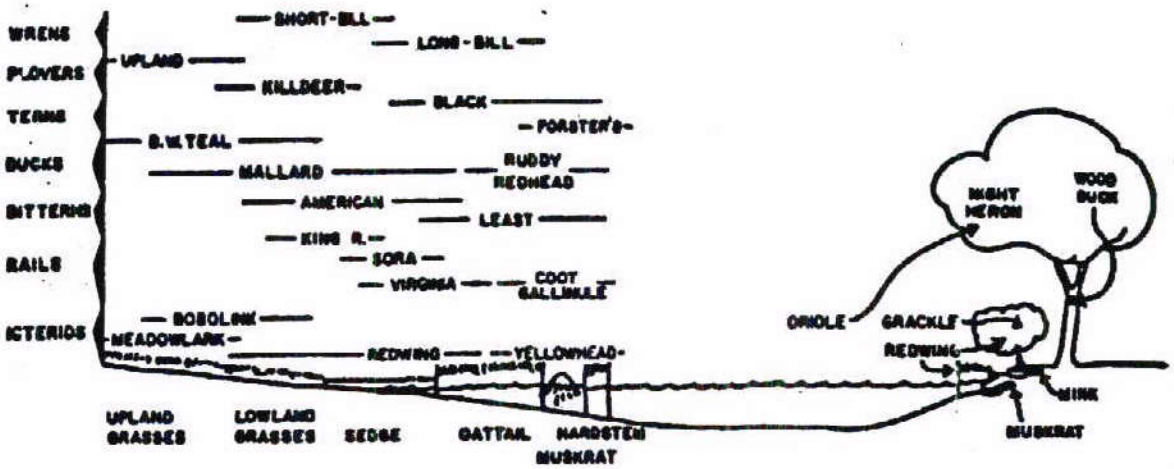
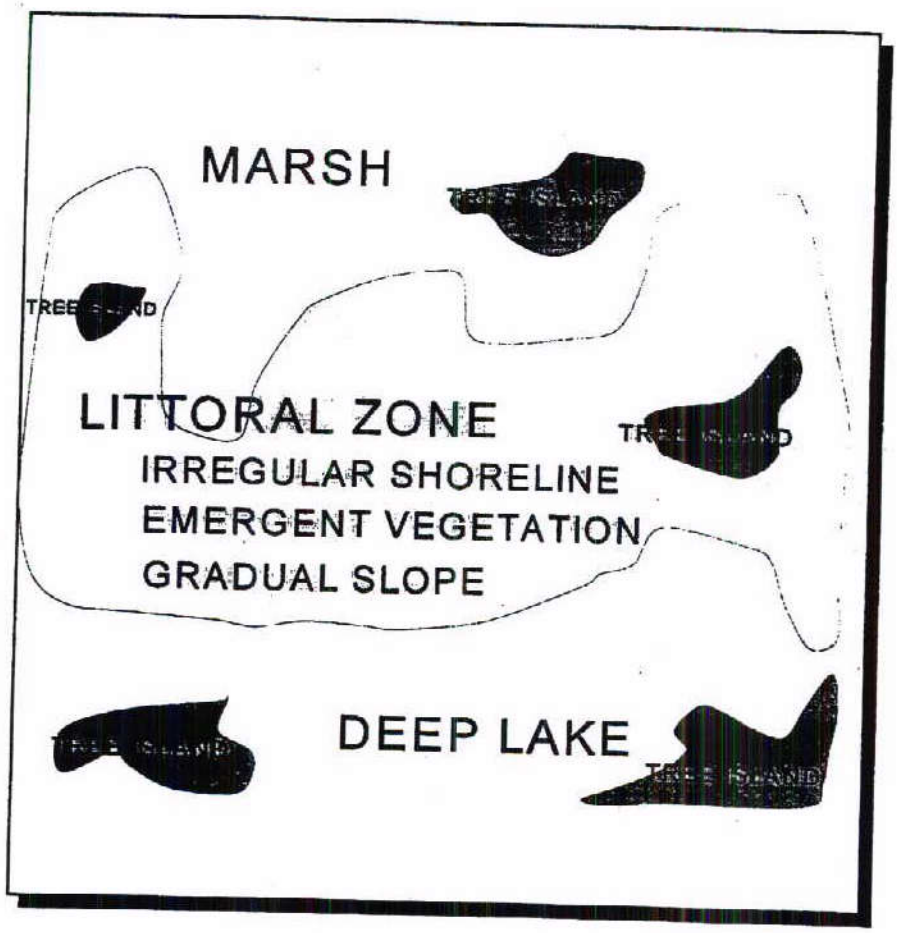
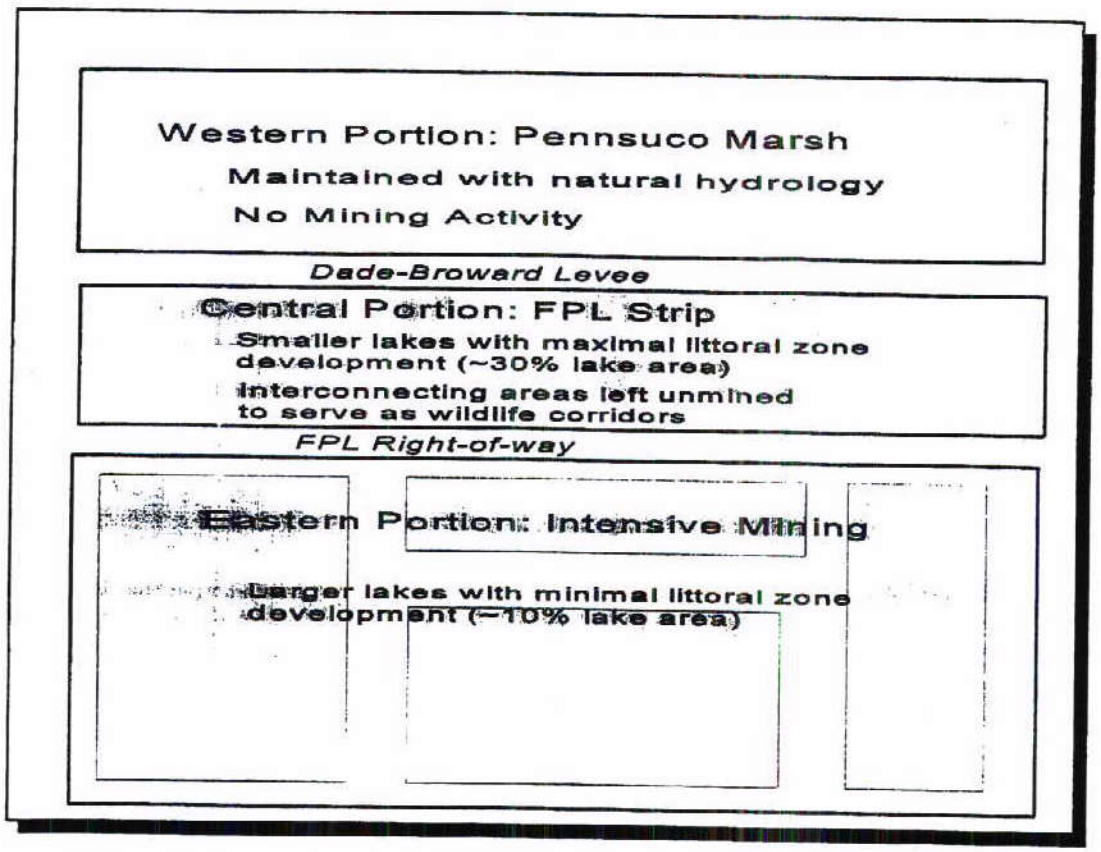


FIGURE 45. Schematic of lake and littoral zone with enhancements for wildlife.



Not to scale

Figure 46. Schematic diagram of a three region Lake Belt Plan.



Not to scale