

Panasoffkee (Sumter County) Florida LAKEWATCH Water Chemistry Summary

Location: Latitude 28°48'22", Longitude 82°7'26"

Period of record: 81 sampling dates; August 5, 1988 to July 14, 1999

Surface Area (Shafer et al. 1986): 4460 acres

Lake Region (Griffith et al. 1997): Central Valley (75-08)

Geologic formation (Brooks 1981a):

The geology is dominated undifferentiated sand, shell, clay, marl, and peat of the Holocene and limestone consisting of skeletons of fossils in a silt to sand size matrix of the Ocala Limestone Formation

Physiographic region (Brooks 1981b):

The lake lies in the Tsala Apopka Basin division of the Ocala Uplift District

Supplemental water chemistry data

Data reported are means from 4 sampling dates:

pH	8.3	Total alkalinity (mg/L as CaCO ₃)	94.8
Conductance (µS/cm @ 25 °C)	234	Color (Pt-Co units)	36
Chloride (mg/L)	10.0	Silicon (mg/L)	9.3
Sulfate (mg/L)	23.2	Calcium (mg/L)	40.3
Magnesium (mg/L)	16.6	Sodium (mg/L)	5.7
Potassium (mg/L)	0.2	Iron (mg/L)	0.0

Long-term Florida LAKEWATCH Data

Numbers reported below are the minimum, average and maximum value for the 81 months sampled:

	<u>Minimum</u>	<u>Average</u>	<u>Maximum</u>
Long-term total phosphorus concentrations (µg/L)	10	28	125
Long-term total nitrogen concentrations (µg/L)	333	745	1640
Long-term total chlorophyll concentrations (µg/L)	2.0	12.2	139.7
Long-term Secchi depth (ft)	2.2	4.1	8.0

2001 Florida LAKEWATCH Data

No samples collected in 2001

Panasoffkee (Sumter County)
Florida LAKEWATCH Aquatic Plant Summary

Aquatic plant data collected on May 26, 1993

Percent area covered with aquatic vegetation (PAC, %)	94.0
Percent of lake's volume filled with vegetation (PVI, %)	64.9
Average emergent plant biomass (kg wet wt/m ²)	6.3
Average floating-leaved plant biomass (kg wet wt/m ²)	3.6
Average submersed plant biomass (kg wet wt/m ²)	17.5
Average width of emergent and floating-leaved zone (ft)	509.1
Average lake depth (m)	1.3

Frequency that plant species occur in 30 evenly spaced transects around the lake.

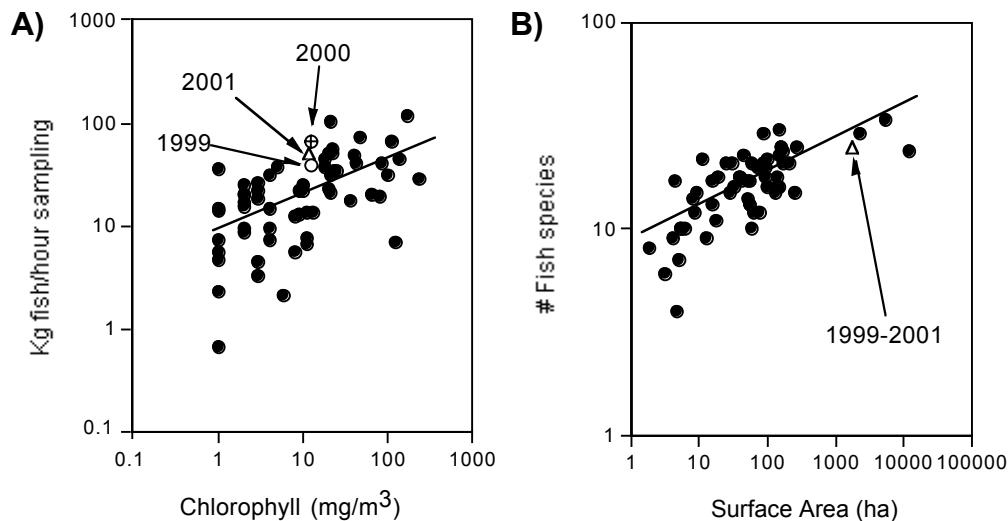
<u>Common Name</u>	<u>Plant Species</u>	<u>Frequency (%)</u>
coontail	<i>Ceratophyllum demersum</i>	100
hydrilla	<i>Hydrilla verticillata</i>	100
cat-tail	<i>Typha spp.</i>	93
water-pennywort	<i>Hydrocotyle umbellata</i>	90
tapegrass	<i>Vallisneria americana</i>	90
pickerelweed	<i>Pontederia cordata</i>	87
common duckweed	<i>Lemna minor</i>	77
giant bulrush	<i>Scirpus californicus</i>	73
elderberry	<i>Sambucus canadensis</i>	70
southern naiad	<i>Najas guadalupensis</i>	67
willow	<i>Salix spp.</i>	67
evening primrose family	<i>Onagraceae</i>	60
yellow water-lily	<i>Nymphaea mexicana</i>	53
frog's-bit	<i>Limnobium spongia</i>	43
green algae	<i>Chlorophyta</i>	40
water hemlock	<i>Cicuta mexicana</i>	40
duck-potato	<i>Sagittaria lancifolia</i>	37
Illinois pondweed	<i>Potamogeton illinoensis</i>	33
bald cypress	<i>Taxodium distichum</i>	27
para grass	<i>Brachiaria mutica</i>	23
water-lettuce	<i>Pistia stratiotes</i>	20
parrot's-feather	<i>Myriophyllum aquaticum</i>	13
Baldwin flat sedge	<i>Cyperus globulosus</i>	13
slender spikerush	<i>Eleocharis baldwinii</i>	10
fragrant water-lily	<i>Nymphaea odorata</i>	10
elephant-ear	<i>Colocasia esculenta</i>	10
sawgrass	<i>Cladium jamaicense</i>	10
knot grass	<i>Paspalum distichum</i>	10
alligator-weed	<i>Alternanthera philoxeroides</i>	7
smartweed	<i>Polygonum hydropiperoides</i>	7
floating water-hyacinth	<i>Eichhornia crassipes</i>	3
salt-bush	<i>Baccharis spp.</i>	3
water primrose	<i>Ludwigia octovalvis</i>	3
torpedograss	<i>Panicum repens</i>	3

Panasoffkee (Sumter County)
2001 LAKEWATCH Electrofishing Data

Species [†]	#/hr	kg/hr [‡]	Canfield and Hoyer (1992) Ranges		
			min weight (kg/hr)	mean weight (kg/hr)	max weight (kg/hr)
Bluefin killifish	133	0	0	0.002	0.008
Bluegill	62	0.815	0.039	4.966	44.702
Bluespotted sunfish	5	0.015	0.001	0.004	0.014
Bowfin	19	18.122	0.746	6.049	22.497
Brown bullhead	2	0.659	0.009	1.667	7.214
Chain pickerel	6	0.78	0.042	2.181	5.706
Dollar sunfish	4	0.033	0.003	0.031	0.05
Florida gar	15	6.52	0.08	5.393	32.858
Golden shiner	2	0.031	0.004	0.625	6.504
Inland silverside	8	0.014	0.002	0.003	0.003
Lake chubsucker	60	16.803	0.03	4.234	16.19
Largemouth bass	21	3.37	0.112	9.084	32.667
Least killifish	19	0.003	0	0	0
Redear sunfish	35	2.459	0.037	2.615	18.31
Seminole killifish	3	0.072	0.002	0.414	2.234
Spotted sunfish	5	0.318	0.001	0.093	0.32
Warmouth	25	1.378	0	0.151	1.196
Total	424	51.392			

[†] Total # of species = 17.

[‡] Weights calculated using regressions from Hoyer and Canfield 1994 and from Bill Schaeffer, Florida Fish and Wildlife Conservation Commission (personal communication).



A) Catch per unit of effort (kg of fish / hour of sampling) versus total chlorophyll (mg/m³) for 60 Florida lakes sampled by Canfield and Hoyer (1992) (●) and Lake Panasoffkee (Sumter County) 1999 (○) and 2000 (⊕) and 2001 electrofishing sampling (⊘). B) Number of fish species collected versus surface area of lake for 60 Florida lakes sampled by Canfield and Hoyer (1992) (●), and cumulative Lake Panasoffkee (1999-2001) (Δ) electrofishing sampling. The lines represent linear regressions for log values of the 60 Florida lakes.