



Teatown Trails

A QUARTERLY NEWSLETTER
OF THE TEATOWN LAKE RESERVATION
OF THE BROOKLYN BOTANIC GARDEN

Our Purpose:

... to maintain forever
the unspoiled natural beauty and wildlife
of a varied landscape . . . and to
promote, through a community education center
a greater awareness, understanding and appreciation
of our natural environment.

"SEE SAW" WEATHER — IS MAN ALTERING THE AIR SHED?

*It rained all night
the day before
The weather she was dry
It was so hot
I froze to death
Suzannah, don't you cry.*

Weather patterns as of late have been just as confusing as the above lyrics from "Ole Suzannah". New records in weather have been increasingly common over the past few years. It seems we are on a meteorological see-saw of weather extremes. This past October, for example, set new records for earliest snowfall, coldest temperatures, and hottest days — all within the same month!

In 1976, a new record heat wave for April was established. We recorded 94° on April 18 at 2:40 p.m. at Teatown. This was the earliest heat wave yet recorded in the northeastern U.S. It had never been that hot before in the month of April — not even on a Fourth of July!

In the early seventies, we had unusually mild winters with many Spring-like days that were more like June than January. Yet, in August of 1972, a new record cold wave was experienced in this area. The see-saw pattern again emerged in the late seventies with intense cold snaps followed by extraordinary mild weather for the winter season.

In spite of these memorable events, a meteorological doomsday is not imminent. An investigation of climate trends by Teatown member Jerome Thaler in his *Westchester Weather Book* reveals that the period between 1891 - 1930 averaged .8° cooler than the period from 1931 - 1960 in the county. Yet, an apparent warming trend was offset to a large degree by a cooling trend in more recent years. (Records for 1941 - 1970 show a ½° drop in average temperatures.) While fall and winter temperatures have lowered in recent years, they are still not as cold as the early 1900's. On the other hand, spring and summer months have been cooler over the last thirty years.

There are as many theories as causitive factors for widespread weather patterns - and for local weather trends as well. It has long been suspected that changes in the jet stream may alter weather. Is man and his technology affecting the jet stream and the atmosphere in general. Many think so, yet these changes, if they in fact exist, are themselves a point of controversy.

A measureable increase in the CO₂ (Carbon Dioxide) level in the atmosphere has come about due to the burning of fossil fuels (and agricultural practices of burning vast areas in some parts of the globe.) This CO₂ acts as a blanket, trapping solar heat and slowing its escape into space thereby increasing global temperatures. The phenomenon is commonly referred to as the "green house" effect. On the other hand, particulate matter, fly ash, dust, and other air borne pollutants may be acting as a heat shield preventing solar radiation from reaching us. (During periods of increased volcanic activity, when much dust has been released in to the atmosphere, climates have cooled.) Could these two man-related pollutants (CO₂ and particulates) be cancelling each other out? No one seems to know the answer.

On a more local level, it has been proven that areas downwind from major (pollution generating) cities may have up to 40% increased rainfall. Here in Westchester, we may be within a "rain shadow" of the New York-New Jersey urban-industrial complex. In 1978, we had abundant summer rainfall, yet drought conditions prevailed upstate. There is also a "heat dome" effect in proximity to large cities. Southern Westchester is within the heat dome of New York City — a factor which moderates winter weather significantly. (No drop in average winter temperature over the last 30 years has been observed at the Scarsdale weather station, but it shows up in the records at Carmel.)

There is much to be learned about climate trends and man's potential for disturbing the balance. Other man-related pollution problems have recently come to light. Acid rainfall reaches extensive areas of Eastern U.S. from centers of industry via prevailing winds. Acid rain

has a damaging effect upon life in our lakes. More recent studies show it also affects our woodlands. This has been reflected in retarded forest growth. Tree growth here in the Northeast has slowed by as much as 14%. The ph of normal rainfall is about 5.5 which is slightly acidic. Measurements in the Adirondacks and in nearby Connecticut, have been as low as 3.5. A ph of 4 means 100 times more acidity than normal rainfall, while a ph of 3 means 1000 times increase in acidity! Rainfall now averages ph 4 east of the Mississippi.

Due to acid rains, trace minerals and calcium are leaching out the soils far faster than they can be replaced. This affects plants as well as the animals which depend upon them. There is new evidence that the resultant lack of calcium in herbaceous plants affects the honeybee who passes by nectar that is low in calcium.

Another air pollutant that may be causing far reaching changes is freon. Freon released into the atmosphere from seemingly insignificant sources such as aerosol can propellants may, as has been widely publicized, cause serious changes worldwide by interfering with the ozone layer which filters out damaging solar radiation.



Fortunately, nature has up till now proven well buffered, stable, and remarkably resilient to man's worst affronts. The carbon dioxide problem is a case in point. Burning of fossil fuels, much of it from former plant life, has been the cause of a significant CO₂ rise in our atmosphere. However, there is mounting evidence that the increase in CO₂ is causing a corresponding increase world wide in plant biomass, via accelerated plant growth rates! As these plants die, some of the carbon dioxide will remain chemically locked within their remains. Thus, some of the CO₂ is going right back into the organic or "fossil fuel" storage bank from which it came!

As they say in the Bronx, "we should always be so lucky." Are our present extremes in weather, a natural phenomenon or a warning?

—Warren Balgooyen

It is with profound sadness that we report the death of Gerard Swope, Jerry Swope was the Reservations' chairman, founder, and chief supporter. His keen interest in every facet of Teatown's operation helped to mold the Reservation into the finely tuned, public oriented institution that it is today. The unique qualities that make Teatown so appealing to the public were fostered under his wise leadership. The personal "family-like" warmth that visitors feel at Teatown; informal, yet businesslike atmosphere; the public commitment of the staff and volunteers, is no accident. It was allowed to grow and develop under our uncommon chairman. Mr. Swope was a leader who took the time to be interested in people — who took great pleasure in seeing others enjoy themselves.

Jerry believed in a vigorous, active life and proved again and again the value of hard work and its rewards. His volunteer work at Teatown included demanding mental and physical tasks that went far beyond the usual commitments of philanthropy. He chopped wood and gathered sap for the maple sugar house. He cleared trails, spread wood chips, and pitched in, helping with such menial tasks as removing litter after the Teatown Fair. He used his carpentry skills to construct bird houses, animal cages, exhibits and children's games for fund raising. His legal skills were tirelessly applied to a variety of corporate problems. He was an active member of many of the committees through which Teatown functions.

What he started and nurtured here will not come to a halt. The foundation he laid was firmly placed and the Teatown Lake Reservation is here to stay as a resource of pride, pleasure, and permanence in the community.

The following was written to the memory of Gerard Swope by his daughter-in-law, Mary Swope:

Putting Away The Boat

*The mast's dead weight across our shoulders
we gather in the shrouds
the trailing stays*

*and with slow steps, by red sumac
where poison ivy glows
and beach plums darken*

*we form a cortege for summer, turn
backs to the beach
to shoulder winter's burden;*

*the sadness we hear
in the cry of the Canada geese as they vee south
is our own, not theirs.*