

DUNE ACRES HISTORICAL COMMISSION

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Departing from our previous format for these papers, we here present much-edited and condensed excerpts from an interview with Barbara Plampin about the natural history of Dune Acres. Barbara Plampin of 18 East Road was born in Michigan, but spent much of her early life in New Mexico. She is a Ph.D in English Language and Literature from the University of Michigan and has taught at the University of Chicago and Illinois Institute of Technology. She is best known locally as a non-professional but highly knowledgeable botanist and lover of and expert on the Dunes. In this, she follows in the footsteps of the late Lois Howes, who was her mentor. Fortunately she was able to annotate the transcript of the interview itself after it was typed. In what follows, BP is, of course, Barbara Plampin. The other voices are those of members of the Historical Commission, MD, Margaret Doyle, and JN, James Newman. Additional information on this subject will be gratefully received by either MD or JN and added to the Dune Acres Archives. Publication of this paper is made possible by a grant from the Dune Acres Civic Improvement Foundation.

JN: Barbara, why don't we start with what the Dune Acres area would have looked like before even the early shacks were built along the shore — roughly in the late 19th century?

BP: To go a long way back, to the early 19th century, the dunes were apparently covered by White Pines. But there was extensive lumbering, before and after the Civil War. According to an account published in 1835, the pines along the trail we call Golf Course Road were being cut for lumber. After the Pines came the Oaks, most of which are pretty young. The dunes were rather bare, as many photos in books from the 1920's illustrate.

JN: Powell Moore in his book, The Calumet Region, says there was extensive lumbering in the region, so much so that a great pier stood at Waverly Beach from which they exported timber to Chicago after the Civil War.

BP: There was enough timber to build Chicago twice, before and after the Great Fire. From a study done by scientists at the National Lakeshore, most of the lumbering was south of the marshland, especially east of here at the present town of Pines where there was a heavy stand of White Pine.

MD: You would say then that our dunes were pretty bare in the early 20th century?

BP: If you observe the present trees around here, most of them are awfully small and among them are a few widely spaced much larger Oak trees. My guess is that before the Town was established, there were a few large Oak trees and not much else. A study done by a National Lakeshore scientist found very few pre-settlement White Pines in Dune Acres.

MD: A lot of trees have been planted here in recent decades. Those trees you see out of my window weren't there when we were first here.

JN: Every year, probably in the sixties, some residents planted pine seedlings provided by the Indiana Department of Natural Resources. All those along East Road in front of Harriet Moore's (34 East Road) and the Hartmann's (36 East Road) were planted then. There used to be an open view across the blowout to the water.

MD: Why did they plant them? To hold the sand?

JN: I don't know, but every spring there would be a flyer in the mailbox urging residents to pick up the seedlings at the fire station and plant them. If you look at the point where East Road curves to run down to the Lake, the planted pines are several rows thick, a virtual grove.

MD: When we moved here, there was absolutely no vegetation down in the blowout — it was just beautiful, beautiful sand — not even a single plug of Marram grass or anything. Now it's completely covered.

BP: Now it's shady in there. You might go down there and look for some woodland plants! Well, another way the landscape has changed is through the spread of cat tails in Cowles Bog. According to a National Lakeshore study, cat tail coverage increased between 1961 and 1970 from 3.5 hectares to 9.7 hectares and then from 1970 to 1975 they really zoomed ahead from 9.7 hectares to 32.3 hectares. It was Lois Howes who first called their attention to how the cat tails were behaving.

MD: Now is that natural progression or did these cat tails get introduced in some outside way?

BP: Well, there were always cat tails, but they behaved politely as I understand it: that is, there were very few of them and they did not proliferate and try to take over. So drainage and industry are thought to be the cause of the great explosion, the geometric progression.

JN: So the native landscape has changed a lot, even in recent years. But what remains permanently distinctive about the flora of the dunes?

BP: Dr. Gerould Wilhelm of the Morton Arboretum speaks of the swamp forest south of the boardwalk (west of the marshal's office) as having been "here since the Pleistocene" and as "irreplaceable." I think the most remarkable survival is that we still have here in Dune Acres and throughout the dunes a crossroads where plants characteristic of very different ecologies grow together: e.g., the desert plant, the cactus, next to the Arctic plant, the bearberry. Then we've got the Pitcher's thistle, which is our most distinctive plant: it is on the Federal list of threatened plants. It has a western cousin, so it has moved here from the West and adapted.

JN: Is this a rare plant everywhere, or just unusual in the Midwest?

BP: It is very rare everywhere; so rare that, as I say, it is a federally protected endangered species. And then we have a number of what are called 'coastal plain disjuncts.' These are plants that grow along the Eastern seaboard and they take a jump and show up in the Midwest sometimes — in Indiana, Michigan, various other spots. You see many of them in Howes Prairie. Here are a few CPD's: marram grass, screwstem (found in wet prairie, swamp forest), sea rocket (grows on the beach), narrow-leaved sundew (also a wet prairie plant). (Ed. note: more are listed in the Appendix.)

JN: And you mentioned the other day that . . . was it the Small Forget-me-not that is an endangered species in Indiana?

BP: It is to be found on either side of the east end of the boardwalk west of the marshal's office. The state does publish lists of plants, animals, and insects, birds, even land snails that are endangered in one way or another or threatened. This list is updated from time to time. (Ed. note: a sample is given in the Appendix.)

MD: Barbara, do you find distinctions within Dune Acres? Does the vegetation and the flora change as you move from the East to the West End?

BP: Yes, to some extent. For example, we have Upland Boneset at the West End and on the Osann's property (92 West Road) and on the former Don Reuben property adjacent to Osann's as well as in the National Lakeshore to the west. Now, whether this was its only location ever at all in this part of the world, I simply don't know. They haven't found it again at the State Park where a botanist reported it in 1927. That's the proper habitat for it. And, as far as I know, there aren't any yellow Lady Slippers on the West side; they're all around the Boothe house (3 Pine Lane) and Helen thinks the plants all descended from the ones in her yard. But some yellow Lady Slippers grow on the south side of Pine Lane, too. Emily Robertson has some, too, but they are transplants.

MD: You mentioned earlier that we have desert plants next to plants from the Arctic. One would think they would need very different conditions to grow.

BP: Actually, both the desert and the Arctic have in common the need to adapt to a seasonal supply of water. One thinks of the Arctic as having water available all the time, but it doesn't. The ground is frozen, and what is the poor plant to do except to develop strategies similar to those of the desert plant, like leaf reduction and something that would store water?

JN: Do we have other plants from the Arctic?

BP: Yes, they are called 'boreal' plants: ones that came down from the north ahead of the glacier and found that they could stay. One is called Goldthread: it's a shiny leafed flower that one would find south of the boardwalk in the swamp forest. The roots are gold in color, and the Indians used it to make a dye. Then there is the Club-Spur Orchid, a few of which grow north of the boardwalk, west of the guard house as well as in the swamp forest. The birches — Yellow birch and Paper birch — are boreal, also.

JN: I know there are birches along the old Golf Course Road, but there aren't many around, are there?

BP: You would find them farther north in greater abundance and Dune Acres is at their southern extremity. But White Pines which were once quite abundant, are boreal, as are Star Flowers.

MD: So they were pushed down by glaciers, these boreals?

BP: Yes. It was colder, of course, when the glacier was right behind them, so they had good growing conditions. Some of them wound up, down in the mountains in Georgia, where they still are. Then they skip to Indiana and go on up north. One interesting characteristic of boreals here is that they often do not bloom. They reproduce themselves by putting out underground runners for example. Apparently it's too warm for them to bother to flower — or whatever the reason; the conditions are not quite right.

JN: You talked about the boreal plants. What about plants that have come up from the South, is that a movement too?

BP: There are certainly plants here that also bloom in the South, for example, the Partridge Berry, which I always thought had to be a northern plant because it has evergreen leaves. But it goes all the way down to Florida, and so does the Trailing Arbutus. I don't know which direction they spread though.

JN: I admire those Yellow Iris that grow down close to the marshal's office.

BP: These are of European origin, and are garden escapees.

JN: I think you told me that some people think they probably shouldn't be here.

BP: The fear is that they and other 'exotics' would displace native plants. Many plants have disappeared; there are plants in the record which no one has seen here in decades. For example, there was Linnaea, the Twin Flower, last seen in the twenties. Around 1912 Mr. Richardson (Richardson Wildlife Sanctuary) photographed expanses of it probably in the Dunes, perhaps in Cowles Bog. All the plants noted as growing with it are still there . . . but where is it? And what would cause one plant to disappear?

MD: Well, now, talking about things disappearing, when you go down that trail from the end of Lupine Lane, it used to be that you'd come around a bend and all of a sudden there would be all these Wood Lilies. And I've either missed them or they are not there any more.

BP: Yes, they apparently were over-picked, but after the 1994 burn, they appeared in greater abundance than I myself have seen them here, and I saw them in several places off Lupine Lane where I'd never seen them before. But lots of good plants are gone: for example, there is a record of Cream Gentians growing somewhere off Fern Lane in the fifties or early sixties, but I don't know of anyone who has seen that Cream Gentian population in decades.

JN: Barbara, let's turn now to what many of us would consider our most distinctive natural phenomenon — Cowles Bog. First of all, where is it? That seems a funny question since everybody knows where it is. But apparently it isn't the wetland we cross entering Dune Acres. Where is the real Cowles Bog?

BP: The marsh one sees on either side of Mineral Springs Road contains what is called scientifically the 'Cowles Bog Wetland Complex.' To that extent we are correct in referring to the whole area as Cowles Bog as a shortening of the long scientific name. But the bog itself lies at the western end of that area of wetlands. It can be seen if you stand by the road just south of the guardhouse and look west across the marsh to the very tall White Pine; then in front of it one can see Northern White Cedars. That is the area of the real Cowles Bog.

MD: Those Northern White Cedars are significant too, aren't they?

BP: Those are the last stand of native Northern White Cedars in all of Indiana. That's partly because of drainage and partly because other stands were cut down for Christmas trees or perhaps for fire wood during the depression.

JN: You commented recently that the marsh we cross on Mineral Springs Road is part of a great marsh that runs all the way west — as far as Miller, I guess.

BP: Yes, it does, and some people say that it goes all the way to Michigan City. Others make it a little shorter and give it a ten mile length.

MD: I want to ask what is the difference between a marsh and a bog?

BP: Bogs, fens, swamps, marshes are defined partly in terms of what grows in them and partly in terms of where they get their water. Marshes are wetlands open to the sun. They are not dominated by trees or shrubs; they get rain water. Of course, but also water from creeks or springs. A bog lies in a depression in the ground; it is not fed except by rain water, not by ground water seepage or run off. By definition, it is 'an acidic mineral-poor water filled depression, much of the surface covered by a floating mat of vegetation.' That is from this book I brought with me. It is not technical, but we will take it as the horse's mouth. It is a good book, incidentally; I recommend it. (Ed. note: see Appendix for title and other information.) It also says that there are few if any true bogs in Indiana, and that is indeed the case with Cowles Bog. Technically, it is not a bog but a fen.

MD: Well, what is the difference between a bog and a fen?

BP: Bogs are stagnant, and mineral poor. Fens have a constant supply of mineral-rich ground water and produce a wider variety of plants. What we call Cowles Bog is fed by an aquifer so it has a source of ground water and is correctly a fen, and has a variety of plants that are characteristic of a fen. (Ed note: Barbara explains in more detail in the Appendix.)

JN: At any rate, Henry Cowles of the University of Chicago studied plant succession here and developed the science of ecology.

BP: Yes, and his work was world famous. He was a member of a group called the International Phytogeographic Excursion. This was a group of continental European, British and American ecologists. They first met in 1911 in the British Isles. And then it was Cowles turn to arrange an American tour for them, and he asked the scientists where they wanted to go. They chose to go to Yellowstone, the Grand Canyon, Yosemite and the Indiana Dunes. This was in 1913, and they spent a couple of August days in the Dunes. They decided the 'bog' had the characteristics of an English fen and the succession pattern resembled a fen-like or 'Niedermoor' type, (drawn from their German experience). (Ed. note: for more on this expedition, see the Appendix.)

JN: I take it they were all ecologists. Had they learned all this from Henry Cowles?

BP: Cowles should more accurately be known as the father of American ecology. The study actually started in Denmark with a man called Warming, whose pioneer work was published in 1895 and which was used at the University of Chicago. It was used in a class taught by Merle Coulter, translated page by page for the class sessions, and the students would try to see what matched Indiana. But it was Henry Cowles who worked out the succession in the bog and in the Dunes, and whose publications formulated the principles of ecology for Americans.

JN: So to draw this together, we can say that the wetland crossed by Mineral Springs Road is not Cowles Bog but a part of the great duneland marsh; that Cowles Bog lies perhaps a mile to the west and is actually a fen; that Henry Cowles founded ecology in America, but not the concept of ecology itself. Dear me! Well, we will no doubt continue to call it all Cowles Bog and find it as fascinating as ever.

BP: That's right; and, as I said, the whole wetland is called the 'Cowles Bog Wetland Complex', so it is perfectly proper to use this term.

MD: To bring this to a close, Barbara, let me ask you what you would like to see or do in the dunes that you haven't done yet?

BP: There are records from early visitors that describe places that I haven't been able to see. There were a group of botanists, a regular crew almost, that got off one South Shore stop or another, and of course they couldn't get much further than they could walk, but they left the most tantalizing records of one kind or another. They mention more bogs or so-called bogs, and I know where two of them were. It just makes me sick that they were drained. There is said to be a privately owned bog south of U.S. 20 that I'd dearly like to explore — also wetlands north of the Marquette Trail in Miller. But most of all, I'd like to have seen the Dunes before any European settlers arrived or before timbering and draining started. At that time, Northern Indiana has been described as a 'land of slow moving streams.' I'd like to have seen it them.

MD & JN: Yes, wouldn't that have been great! Thank you, Barbara.

APPENDICES

A. List of further Atlantic Coastal Disjuncts:

Yellow-eyed grass (found in Howes Prairie; not a grass at all but a 'cute little three petalled flower'; also along the Calumet bike trail to Kemil Road)

Purple Bladderwort (found in Little Lake)

B. Listed Endangered Plants:

Federally listed: Pitcher's Thistle

State listed: Speckled Alder, Marram Grass, Bearberry, Paper Birch, Northern Bush Honey-suckle, Sundews, Black-Fruited Spike Rush, Seaside Spurge, Kalm's St. Johnswort, Cow Wheat, Small Forget-me-not, Club-Spur Orchid, White Pine, Jack Pine, Large-leaved Skinleaf, Hall's Bulrush (proposed for a Federal listing), Reticulated Nutrush, Dunes (Sticky) Goldenrod, Northern White Cedar, Purple Bladderwort.

C. Recommended book

Michael A. Homoya, Orchids of Indiana (Indiana Academy of Science, 1993)

The Powell Moore book mentioned earlier is The Calumet Region, Indiana's Last Frontier (Indiana Historical Collections, vol. XXXIX, Indiana Historical Bureau, 1959)

D. The difference between a bog and a fen:

A bog is defined in the text. It is fed only by rain water and is mineral-poor. In a fen, there is ground water flowing to the surface and spreading in a diffuse manner, usually through a muck soil. The place where the cedars grow in the so-called Cowles Bog is a mound of peat with marl, sand and clay underneath it. It has an aquifer in it which allows water to come up to the surface and diffuse under the mound; then this water flows into what is called a sedge meadow. Fens support a more interesting flora than a bog. Bog plants are usually fewer in number, but some are very odd, especially the carnivorous ones which make up for the absence of trace minerals by eating insects.

E. Visit of the International Phytogeographic Excursion to the Cowles Bog in 1913:

There is an account of the expedition by George Fuller, who was a graduate student assistant to Henry Cowles. The group arrived at the 63rd Street Illinois Central Station and spent the first day on the University of Chicago campus. The next day (August 2), they went to Miller. Then, on August 3, the group went back into the dunes, but this time they penetrated further into Indiana. First they took the Michigan Southern to the next station beyond Miller, Dune Park (ed. note: now site of Bethlehem Steel) where they visited the large tract of high moving dunes, that had always been one of Cowles' favorite sites . . . After lunching in the field, the group took the South Shore further east . . . and disembarked at Mineral Springs station (ed. note: the former Dune Acres CSSSR stop), where Mineral Springs crosses the northern slope of the Calumet Beach Ridge. The Excursion program was the first specific reference we have

to this wetland. They observed the stages of bog development from the reed swamp through the stage of 'xerophytic' (that is, needing little moisture) shrubs to the tamarack and climax forest. They describe some of the plants they saw and concluded that the bog had the characteristics, including the succession pattern, of an English fen. The expedition, in August, 1913, was the last held as the First World War broke out in August 1914.

F. On a Completely Different Subject:

In the course of this conversation, the interviewers and Barbara Plampin occasionally strayed off to other topics, as happens so often in these oral interviews. Some of the best parts are often best not transcribed. Here, though, is one passage containing some interesting memorabilia, taking off from a reference to the shacks that had been built along the lake bluffs before the Town of Dune Acres was established. The passage also conveys the more natural flow of the conversation on tape before the editing.

JN: Well, as you know, there were a number of shacks in Dune Acres. I discovered those people had leases. I hadn't realized that; I thought they were squatters. And some of those, I think, persisted well into the thirties. In fact, it was not until well into the fifties that the town passed an ordinance that you had to build a year round home.

MD: In Dune Acres? I've heard there was somebody down there — his name was Davis, I think — Christmas Valley — he had all sorts of lights, and a little shack and they finally told him he had to do something about it.

JN: Beautiful property!

BP: This was the name of a specific hollow, Christmas Valley? Where was that?

JN: It's where Farwell Smith built his house ... if you know where that is. And that was bought recently by John Nagy and Oleg Petrov.

MD: They've built a new house there.

JN: If you go down East Road, past Summit Drive, it was off to the right...

MD: The Blair's lived there most recently.

BP: And that was called Christmas Valley? Why? Were there Christmas trees, or Christmas ferns or...?

JN: I don't know, it had a lot of big trees on it.

MD: I understand he had lights all strung up out there, and music piped in — he'd sit out there and look at the lights and listen to the music, but all he had was this little shack or hut of some sort, and people were not ... not very happy about it.

JN: And that hill on Summit Drive — when you get to the top of the road and turn right, that hill where the Upjohn house burned down was called Blueberry Hill. It belonged to Peter DeBruyn, who was a professor of Anatomy at Chicago.

MD: He was my Histology professor.

JN: I bet he was dull, wasn't he?

MD: Well, actually he was the laboratory person. Dr. Bloom gave the lectures, and Bloom was the one who — the class met at 8:00 a.m. Monday, Wednesday and Friday, and if you weren't there by 8:00 he locked the door, you couldn't get in. It was kind of a difficult course to get through if you didn't get to lectures . . . people would come and bang on the door — but no..

JN: Dr. DeBruyn's wife had that very pretty little place at the corner of Oak Hill Road and Mineral Springs. She had hundreds and hundreds of spring flowers but I am afraid the deer have eaten all but the Daffodils.

MD: I don't know. I used to go by there a lot, but I haven't recently.

(Ed. note: The group then turned back to fens and bogs, boreals, Atlantic Coastal Disjuncts, and related topics.)