

Pohnpei

In the 1830s, when Darwin was sailing on the *Beagle*, exploring the Galapagos and Tahiti, and the youthful Melville was dreaming of South Seas travels to come, James O'Connell, a sailor from Ireland, was marooned on the high volcanic island of Pohnpei. The circumstances of his arrival are unclear—he claimed, in his memoirs, to have been shipwrecked on the *John Bull* near Pleasant Island, eight hundred miles away; and then, improbably, to have sailed from Pleasant Island in an open boat to Pohnpei in a mere four days. Once he arrived, O'Connell wrote, he and his companions were seized by “cannibals,” and narrowly escaped being eaten for dinner (so they thought) by diverting the natives with a rousing Irish jig. His adventures continued: he was submitted to a tattooing ritual by a young Pohnpeian girl who turned out to be the daughter of a chief; he then married the daughter, and became a chief himself.²⁴

Whatever his exaggerations (sailors tend to tall tales, and some scholars regard him as a mythomaniac), O'Connell had another side, as a curious and careful observer. He was the first European to call Pohnpei, or Ponape, by its native name (in his orthography, “Bonabee”): the first to give accurate descriptions

of many Pohnpeian customs and rites; the first to provide a glossary of the Pohnpeian language; and the first to see the ruins of Nan Madol, the remnant of a monumental culture going back more than a thousand years, to the mythological *keilahn aio*, “the other side of yesterday.”

His exploration of Nan Madol formed the climax and the consummation of his Pohnpeian adventure; he described the “stupendous ruins” in meticulous detail—their uncanny desolation, their investment with taboo. Their size, their muteness, frightened him, and at one point, overwhelmed by their alienness, he suddenly “longed for home.” He did not refer to, and probably did not know of, the other megalithic cultures which dot Micronesia—the giant basalt ruins in Kosrae, the immense taga stones in Tinian, the ancient terraces in Palau, the five-ton stones of Babeldaop bearing Easter Island–like faces. But he realized what neither Cook nor Bougainville nor any of the great explorers had—that these primitive oceanic islands, with their apparently simple, palm–tree cultures, were once the seat of monumental civilizations.

We set out for Nan Madol on our first full day in Pohnpei. Located off the far side of Pohnpei, it was easiest to approach by boat. Not sure exactly what we would encounter, we took gear of every kind—storm gear, scuba gear, sun gear. Moving slowly—we had an open boat with a powerful outboard—we left the harbor at Kolonia and passed the mangrove swamps which fringe the main island; I could pick out their aerial roots with my binoculars, and Robin, our boatman, told us about the mangrove crabs which scuttle among them and are considered a delicacy on the island. As we moved into open water, we picked up speed, our boat throwing a huge foaming wake behind it, a great scythe

of water which glittered in the sun. A sense of exhilaration seized us as we sped along, almost on the surface, like a giant water ski. Bob, who has a catamaran and a windsurfer, was excited by seeing canoes with brilliantly colored sails here and there, tacking sharply in the wind, but absolutely stable with their outriggers. "You could cross an ocean," he said, "with a *proa* like that."

Rather suddenly, about half an hour out, the weather changed. We saw a grey funnel of cloud barrelling rapidly toward us—another few seconds, and we were in the thick of it, being tossed to and fro. (Bob, with great self-possession, managed to get a superb photo of the cloud before it hit us.) Our visibility down to a few yards, we could no longer get our bearings. Then, just as abruptly, we were out of the cloud and wind, but in the midst of torrential and absolutely vertical rain—at this point, absurdly, we unfurled the bright red umbrellas our hotel had provided, no longer heroes in the eye of the storm, but parasoled picnickers in a Seurat painting. Though the rain still poured down, the sun came out once again, and a spectacular rainbow appeared between sky and sea. Knut saw this as a luminous arc in the sky, and started to tell us of other rainbows he had seen: double rainbows, inverted rainbows, and, once, a complete rainbow circle. Listening to him now, as so often before, we had the sense that his vision, his visual world, if impoverished in some ways, was in others quite as rich as our own.

There is nothing on the planet quite like Nan Madol, this ancient deserted megalithic construct of nearly a hundred artificial islands, connected by innumerable canals. As we approached—going very slowly now, because the water was shallow, and the waterways narrow—we started to see the details of the walls, huge hexagonal columns of black basalt, so finely interlocking

and adjusted to each other as to have largely survived the storms and seas, the depredations of many centuries. We glided silently between the islets, and finally landed on the fortress island of Nan Douwas, which still has its immense basalt walls, twenty-five feet in height, its great central burial vault, and its nooks and places for meditation and prayer.

Stiff from the boat, eager to explore, we scrambled out and stood beneath the giant wall, marvelling how the great prismatic blocks—some, surely, weighing many tons—had been quarried and brought from Sokehs on the other side of Pohnpei (the only place on the island where such columnar basalt is naturally extruded) and levered so precisely into place. The sense of might, of solemnity, was very strong—we felt puny, overwhelmed, standing next to the silent wall. But we had a sense too of the folly, the megalomania, which goes with the monumental—the "wild enormities of ancient magnanimity"—and all its attendant cruelties and sufferings; our boatman, Robin, had told us about the vicious overlords, the Saudeleurs, who had conquered Pohnpei and reigned in Nan Madol for many centuries, exacting an ever more murderous tribute of food and labor. When one looked at the walls with this knowledge, they took on a different aspect, and seemed to sweat with the blood and pain of generations. And yet, like the Pyramids or the Colosseum, they were noble as well.

Nan Madol is still virtually unknown to the outside, almost as unknown as when O'Connell stumbled upon it 160 years ago. It was surveyed by German archaeologists at the beginning of the twentieth century, but it is only in the past few years that a detailed knowledge of the site and its history has been achieved, with radiocarbon dating human habitation to 200 B.C. The Pohnpeians, of course, have always known about Nan Madol, a

knowledge embedded in myth and oral history, but because the place itself is still invested with a sense of sacredness and taboo, they hesitate to approach it—their tradition is full of tales of those who met untimely deaths after offending the spirits of the place.

It was an uncanny feeling, as Robin gave us vivid details of life as it once was in the city around us—I began to feel the place breathing, coming to life. Here are the old canoe docks, Robin said, gesturing at Pahnwi; there is the boulder where pregnant women went to rub their stomachs to ensure an easy birth; there (he pointed to the island of Idehd) is where an annual ceremony of atonement was held, culminating in the offering of a turtle to Nan Samwohl, the great saltwater eel who served as a medium between the people and their god. There, on Peikapw, the magical pool where the ruling Saudeleurs could see all that was taking place on Pohnpei. There, the great hero Isohkelekel, who had finally vanquished the Saudeleurs, shocked at seeing his aged face reflected in the waters, threw himself into the pool and drowned, a Narcissus in reverse.

It is the emptiness, the desertedness, finally, of Nan Madol which makes it so uncanny. No one now knows when it was deserted, or why. Did the bureaucracy collapse under its own weight? Did the coming of Isohkelekel put an end to the old order? Were the last inhabitants wiped out by disease, or plague, or climatic change, or starvation? Did the sea rise, inexorably, and engulf the low islands? (Many of them, now, are under water.) Was there a feeling of some ancient curse, a panicked and superstitious flight from this place of the old gods? When O'Connell visited 160 years ago, it had already been deserted for a century or more. The sense of this mystery, the rise and fall of cultures, the unpredictable twists of fate, made us contemplative, silent, as we returned to the mainland.²⁵

The return journey, indeed, was difficult, and frightening, as night fell. It started to rain again, and this time the rain was driven violently, slantingly, by a strong wind. In a few minutes we were utterly soaked, and began to shiver in the chill. A dense, drizzling mist settled over the water as we inched in, with extreme circumspection, fearing every moment to be grounded on the reef. After an hour in this thick, soupy, blinding fog, our other senses had adapted, sharpened—but it was Knut who picked out the new sound: an intricate, syncopated drumming, which gradually grew louder as, still blinded, we approached the shore. Knut's auditory acuteness is quite remarkable—this was not unusual in achromatopes, he told us, perhaps a compensation for the visual impairment. He picked up the drumming when we were still half a mile or more from shore, even before Robin, who, expecting it, was listening intently.

This beautiful, mysterious, complex drumming came, we were to discover, from a trio of men pounding sakau on a large stone by the dock. We watched them briefly when we landed. I was eagerly curious about sakau, especially as Robin had expatiated on its virtues as we returned from Nan Madol. He drank it every night, he said, and with this the tension of the day drained out, a peaceful calm came upon him, and he slept deeply and dreamlessly (he could not sleep otherwise). Later that evening Robin came along to the hotel with his Pohnpeian wife, bearing a bottle of slimy greyish liquid; it looked, to my eyes, like old motor oil. I sniffed it gingerly—it smelled of licorice or anise—and tasted a little, uncouthly, in a tooth glass from the bathroom. But sakau is supposed to be drunk with due protocol, from coconut shells, and I looked forward to drinking it in the proper way, at a traditional sakau ceremony.

Pohnpei was one of the first of the Carolines to be colonized by humans—Nan Madol is much older than anything to be found on any of the outlying atolls—and with its high terrain, its size, and rich natural resources, it is still the ultimate refuge when disaster strikes the smaller islands. The atolls, smaller, more fragile, are intensely vulnerable to typhoons, droughts, and famines—Oroluk, according to legend, was once a thriving atoll, until most of it washed away in a typhoon; it now consists of a fifth of a square mile.²⁶ Moreover, all of these islands, with their limited size and resources, are liable sooner or later to reach a Malthusian crisis of overpopulation, which must lead to disaster, unless there can be emigration. Throughout the Pacific, as O'Connell observed, islanders are periodically forced to emigrate, setting out in their canoes, as their ancestors did centuries before, not knowing what they will find, or where they will go, and hoping against hope that they may find a new and benign island to resettle.²⁷

But Pohnpei's satellite atolls are able to turn to the mother island in such times, and thus there are separate enclaves in the town of Kolonia, Pohnpei's capital, of refugees from other islands—Sapwuahfik, Mwoakil, Oroluk, and even the Mortlock Islands, in the neighboring state of Chuuk. There are two sizeable Pingelapese enclaves on Pohnpei, one in Sokehs province, the other in Kolonia, first established when Pingelap was devastated by the 1905 typhoon, and enlarged by subsequent emigrations. In the 1950s there came yet another emigration from Pingelap, this time in consequence of extreme overcrowding, and a new enclave was established by six hundred Pingelapese in the remote Pohnpeian mountain valley of Mand. Since then the village has burgeoned to a population of more than two thousand Pingelapese—three times the population of Pingelap itself.

Mand is isolated geographically, but even more ethnically and culturally—so that forty years after the original settlers migrated here from Pingelap, their descendants have avoided, largely, any contact or marriage with those outside the village, and have maintained, in effect, an island on an island, as homogenous genetically and culturally as Pingelap itself—and the maskun is, if anything, even more prevalent here than on Pingelap.

The road to Mand is very rough—we had to travel in a jeep, often slowing down to little more than a walking rate—and the journey took more than two hours. Outside Kolonia, we saw occasional houses and thatched sakau pubs, but as we climbed, all signs of habitation disappeared. A separate trail—traversable only by foot or by four-wheel drive—led off from the main road, climbing steeply up to the village itself. As we got higher, the temperature and humidity diminished, a delightful change after the heat of the lowlands.

Though isolated, Mand is a good deal more sophisticated than Pingelap, with electricity, telephones, and access to university-trained teachers. We stopped first at the community center, a spacious, airy building with a large central hall used for village meetings, parties, dances. Here we could spread out our equipment and meet some of the achromatopes of the community, and distribute sunglasses and visors. Here, as on Pingelap, there was a certain amount of formal testing, and we explored the details of daily life in this very different environment, and how much this might be helped with proper visual aids. But, as in Pingelap, it was Knut, quietly open about himself, who could do the deepest, most sympathetic probing and counselling. He spent a good deal of time with the mother of two achromatopic children, five years and eighteen months old, who was deeply

anxious that they might go completely blind—fearful too that their eye condition might have been her fault, that it was something she had done during pregnancy. Knut did his best to explain to her the mechanisms of heredity, to reassure her that her daughters would not go blind, that there was nothing wrong with her as a wife or a mother, that the maskun was not necessarily a barrier to receiving an education and holding a job, and that with the proper optical aids and eye protection, the proper understanding, her daughters could do as well as any other child. But it was only when he made clear that he himself had the maskun—she suddenly stared at him in a new way at this point—that his words seemed to take on a solid reality for her.²⁸

We moved on to the school, where a busy day was in progress. There were twenty or thirty children in each class, and, in each, two or three were colorblind. There were a number of excellent, well-trained teachers here, and the level of education, sophistication, was clearly far better than on Pingelap; some of the classes were in English, others in Pohnpeian or Pingelapese. In one class of teenagers, we sat in on a lesson in astronomy—this included pictures of earthrise from the moon and close-ups of the planets from the Hubble space telescope. But admixed with the latest astronomy and geology, the secular history of the world, a mythical or sacred history was given equal force. If the students were taught about shuttle flights, plate tectonics and submarine volcanoes, they were also immersed in the traditional myths of their culture—the ancient story, for example, of how the island of Pohnpei had been built under the direction of a mystical octopus, Lidakika. (I was fascinated by this, for it was the only cephalopod creation myth I had ever heard.)

Watching two little achromatopic girls doing their arith-

metic lessons with their noses virtually touching the pages of the book, Knut was reminded powerfully of his own school days, before he had any optical aids. He pulled out his pocket magnifying loupe to show them—but it is not easy, unpracticed, to use a high-power magnifying glass to read with.

We stayed longest in a class of five- and six-year-olds, who were just learning to read. There were three achromatopic children in this class—they had not been placed, as they should have been, in the front row; and it was immediately apparent that they could not see the letters on the blackboard where the teacher was printing, which the other children could see easily. “What’s this word?” the teacher would ask—everyone’s hands would shoot up, including the achromatopes; and when another child gave the answer, they echoed it in unison. If they were asked first, though, they could not answer—they were just imitating the other children, pretending to know. But the achromatopic children seemed to have developed very acute auditory and factual memories, precisely as Knut had developed in his own childhood:

Since I could not actually discern the individual letters even in ordinary book print . . . I had developed a very keen memory. It was usually enough if a class-mate or someone in the household read my home-assignment to me once or twice, in order for me to remember and reproduce it, and to perform a rather convincing reading behaviour in class.

The achromatopic children were oddly knowledgeable too about the colors of people’s clothing and various objects around them—and often seemed to know what colors “went” with what. Here again Knut was reminded of his own childhood strategies:

A constantly recurring harassment throughout my childhood, and later on too, was having to name colors on scarves, ties, plaid skirts, tartans, and all kinds of multi-colored pieces of clothing, for people who found my inability to do so rather amusing and quite entertaining. As a small child I could not easily escape these situations. As a pure defence measure, I always memorized the colours of my own clothes and of other things around me, and eventually I learned some of the "rules" for "correct" use of colours and the most probable colours of various things.

Thus we could already observe in these achromatopic children in Mand how a sort of theoretical knowledge and know-how, a compensatory hypertrophy of curiosity and memory, were rapidly developing in reaction to their perceptual problems. They were learning to compensate cognitively for what they could not directly perceive or comprehend.²⁹

"I know that colors carry importance for other people," Knut said later. "So I will use color names when necessary to communicate with them. But the colors as such carry no meaning for me. As a kid, I used to think that it would be nice to see colors, because then I would be able to have a driver's license and to do things that people with normal color vision can do. And if there were some way of *acquiring* color vision, I suppose it might open a new world, as if one were tone deaf and suddenly became able to hear melodies. It would probably be a very interesting thing, but it would also be very confusing. Color is something you have to grow up with, to mature with—your brain, the whole system, the way you react to the world. Bringing in color as a sort of add-on later in life would be overwhelming, a lot of in-

formation I might not be able to cope with. It would give new qualities to everything that might throw me off completely. Or maybe color would be disappointing, not what I expected—who knows?"³⁰

We met Jacob Robert, an achromatope who works at the school, in charge of ordering books and supplies. He was born in Pingelap, but emigrated to Mand in 1958 to finish high school. In 1969, he told us, he had been flown, with Entis Edward and a few others, to the National Institutes of Health in Washington for special genetic studies associated with achromatopsia—this was his first glimpse of life outside Micronesia. He was particularly intrigued, when he was there, to hear about the island of Fuur, in Denmark. He had not known there were any other islands of the colorblind in the world, and when he returned to Pohnpei, his fellow achromatopes were fascinated too. "It made us feel less alone," he said. "It made us feel we had brothers somewhere in the big world." It also started a new myth, that there was "a place in Finland, which gave us the achromatopsia." When we had heard this myth in Pingelap, we had assumed it was a new one, generated by Knut's presence; now, as we listened to Jacob, and how he had brought back news of a place in the far north with the maskun, it became evident that the myth had arisen twenty-five years earlier and, perhaps now half forgotten, had been reanimated, given a new form and force, with Knut's arrival.

He was intrigued to hear the story of Knut's own childhood in Norway, so similar in many ways to his—and yet different, too. Jacob had grown up surrounded by others with the maskun and by a culture which recognized this; most achromatopes around the world grow up in complete isolation, never knowing (or even knowing of) another of their kind. Yet Knut and his

brother and sister, by a rare genetic chance, had each other—they lived on an island, a colorblind island, of three.

The three of them, as adults, all achromatopic, all highly gifted, have reacted and adapted to their achromatopsia in very different ways. Knut was the firstborn, and his achromatopsia was diagnosed before he started school—but it was felt that he would never be able to see well enough to learn to read, and recommended that he (and his siblings, later) be sent to the local school for the blind. Knut rebelled at being regarded as disabled, and refused to learn Braille by touch, instead using his sight to read the raised dots, which cast tiny shadows on the page. He was severely punished for this and forced to wear a blindfold in classes. Soon after, Knut ran away from the school, but determined to read normal print, taught himself to read at home. Finally, having convinced the school administrators that he would never make a willing student, Knut was allowed to return to regular school.

Knut's sister, Britt, dealt with her loneliness and isolation as a child by identifying with, becoming a member of, the blind community. She flourished at the school for the blind as much as Knut hated it, becoming fluent in Braille; and she has spent her professional life as an intermediary between the blind and sighted worlds, supervising the transcription and production of books into Braille at the Norwegian Library for the Blind. Like Knut, Britt is intensely musical and auditory and loves to close her eyes and surrender herself to the nonvisual domain of music; but equally, she relaxes by doing needlework, using a jeweller's loupe attached to her glasses, to keep her hands free.

It was now three in the afternoon—time to set back for Kolornia—and despite our altitude, burningly hot. While Knut sat

under a shade tree to cool off, Bob and I decided to dive into the beautifully clear stream which ran nearby. Finding a flat rock under the surface, shaded by ferns, I clung onto this and let the cool waters stream over me. Downstream, a quarter of a mile or so, some of the women were washing dark, heavy clothes—the formal Sunday wear of Mand.

Refreshed by our swim, Bob and I decided to walk down the trail from the village; the others would meet us at the road below in the jeep. In the afternoon light, we were dazzled by the brilliance of oranges hanging in the trees—they seemed almost alight in the dark green foliage, like Marvell's oranges in his poem "Bermudas":

He hangs in shades the Orange bright,
Like golden Lamps in a green Night.

I felt a sudden sadness that Knut, that the achromatopes around us, could not share this startling Marvellian vision.

We had gone a couple of hundred yards when we were overtaken by a twelve-year-old boy running at top speed, fearlessly, looking like a young knight with his new sun visor. He had been squinting, looking down, avoiding the light when we saw him earlier, but now he was running in broad daylight, confidently making his way down the steep trail. He pointed to the dark visor and gave a big smile. "I can see, I can see!" and then he added, "Come back soon!"

Dusk descended as we drove back slowly to Kolornia, and we began to see occasional bats, then great numbers of them, rising from the trees, taking off on their nighttime forays, emitting shrill cries (and doubtless sonar too). Bats are often the only mammals that manage to make it to distant islands (they were

the only mammals on Pohnpei and Guam, until rats and others were introduced from sailing ships), and one feels they ought to be more respected, more loved, than they are. They are considered fancy eating on Guam, and exported by the thousand to the Marianas. But they are an essential part of the island's ecology, eating many types of fruit and distributing the seeds, and one hopes their delicious taste does not lead to their extinction.

Greg Dever, director of the Pacific Basin Medical Officers Training Program in Kolonia, has a brusque surface, but underneath this is deeply romantic and dedicated to his work. He had gone to Palau as a young man in the Peace Corps, and had been shocked at what he saw—a fearful incidence of treatable diseases, combined with a drastic shortage of doctors—and this decided him on a career in medicine, so that he could return to Micronesia as a doctor. He trained as a pediatrician at the University of Hawaii and moved to the Carolines fifteen years ago. Here on Pohnpei he has established a small hospital, a clinic and outreach service stretching to the outlying atolls, and a medical program aimed at training indigenous students from all the archipelagoes, in the hope that when they graduate as doctors they will stay and practice and teach in the islands (although some, now that their degrees are accepted in the States, have gone on to more lucrative careers on the mainland).³¹

He had asked us, as visiting scientists, to give a presentation on the maskun. We felt odd, as visitors, talking to these doctors, mostly native, about problems they themselves presumably had lived with and knew intimately. Yet we thought that our very naïveté, coming at the subject from another angle, might have some value for the audience—and we hoped we might learn more from them as well. But it became increasingly clear—as

Bob spoke about the genetics and the retinal basis of the maskun; I about adapting neurologically to such a condition; and Knut about the challenges of actually living with it—that many of those in the audience had never actually encountered the maskun. We found this extraordinary. Even though there are half a dozen papers in the scientific literature on the maskun, here in the capital of achromatopsia there was almost no local medical awareness of the problem.

One reason for this, perhaps, had to do with the simple act of recognizing and naming the phenomenon. Everyone with the maskun has behaviors and strategies which are obvious once one is attuned to them: the squinting, the blinking, the avoidance of bright light. It was these which allowed an instant mutual recognition between Knut and the affected children the moment he landed on Pingelap. But before one has assigned a meaning to these behaviors, categorized them, one may just overlook them.

And there is also a medical attitude, enforced by necessity, which militates against proper recognition of the maskun. Greg and many others have worked incessantly to train good doctors in under-doctored Micronesia. But their hands are constantly full with critical conditions demanding immediate attention. Amebiasis and other parasitic infections are rife (there were four patients with amebic liver abscesses in the hospital while we were there). There are constant outbreaks of measles and other infectious diseases, partly because there are not enough resources to vaccinate the children. Tuberculosis is endemic in the islands, as leprosy once was.³² Widespread chronic vitamin-A deficiency, probably linked to the shift to a Western diet, can cause severe ear and eye problems (including night blindness), lower resistance to infection, and lead to potentially fatal mal-

absorption syndromes. Though almost every form of venereal disease is seen, AIDS has not yet appeared in this remote place, but Greg worries about the inevitable: "All hell will break loose when we get AIDS," he said. "We just don't have the manpower or the resources to deal with it."

This is the stuff of medicine, the acute medicine which must be the first priority in the islands. There is little time or energy left over for something like the maskun, a congenital, nonprogressive condition which one can live with. There is no time for an existential medicine which enquires into what it might *mean* to be blind or colorblind or deaf, how those affected might react and adapt, how they might be helped—technologically, psychologically, culturally—to lead fuller lives. "You are lucky," said Greg. "You have the time. We're too harried here, we don't have the time."

But the unawareness of achromatopsia is not limited to medical professionals. The Pingelapese of Pohnpei tend to stay among their own, and the achromatopes among them—who often stay inside, out of the bright light and out of sight, for much of the day—form an inconspicuous and almost invisible enclave within the Pingelapese enclave itself, a minority within a minority. Many people on Pohnpei do not know of their existence.

Kolonia is the only major town on Pohnpei, situated on the north coast next to a wide harbor. It has a charming, indolent, run-down feel. There are no traffic lights in Kolonia, no neon signs, no cinemas—only a shop or two, and, everywhere, sakau bars. As we walked along the middle of the main street, almost deserted at noontime, looking in at the sleepy souvenir shops and scuba shops on either side, we were struck by its noncha-

lant, dilapidated air. The main street has no name, none of the streets now have names; Kolonians no longer remember, or are anxious to forget, the street names imposed by successive occupations and have gone back to talking of them, as in precolonial days, as "the street by the waterfront" or "the road to Sokehs." The town seemed to have no center, and what with this, and the nameless streets, we kept getting lost. There were a few cars on the road, but they moved extraordinarily slowly, at a walking pace or slower, stopping every few yards for dogs which were lying in the road. It was difficult to believe that this lethargic place was in fact the capital not only of Pohnpei, but of the Federated States of Micronesia.

And yet, here and there, rising incongruously above tin-roofed shanties, were the bulky cinderblock buildings of the government and the hospital, and a satellite dish so vast that it brought to mind the huge radio telescopes in Arecibo. I was amazed to see this—were the Pohnpeians searching for life in outer space? The explanation, more mundane, was still in its way rather astonishing: The satellite dish is part of a modern telecommunications system: the mountainous terrain and bad roads had prevented the installation of a telephone system until a few years ago; now the satellite system allows instant, crystal-clear conversations between the most isolated parts of the island, and gives Pohnpei access to the Internet as well, a page on the World Wide Web. In this sense, Kolonia has skipped the twentieth century and moved direct, without the usual intermediate stages, to the twenty-first.

As we explored further, we also got the feeling of Kolonia as an archaeological site or palimpsest composed of many strata, many cultures superimposed one upon another. There were signs of American influence everywhere (perhaps one saw this

most in the Ambrose supermarket, where tins of cuttlefish in their own ink sat next to entire aisles devoted to Spam and other tinned meats); but beneath this, more faintly, those of the Japanese, the German, and the Spanish occupations, all superimposed upon the original harbor and village, which the Pohnpeians, in O'Connell's day, had called Mesenieng, "the eye of the wind," a magical and sacred place.

We tried to imagine what the town had been like in the 1850s, a couple of decades after O'Connell landed here. Then too it had been a roistering town, for Pohnpei had become a favorite stopping place for British vessels plying the trade routes to China and Australia and, a little later, for American whalers. The attractions of Pohnpei, allied to the brutalities and hardships of shipboard life (which had caused Melville to jump ship in the 1840s), incited frequent desertions, and the island rapidly acquired a colorful assortment of "beachcombers," to use the contemporary term.³⁵ The beachcombers brought with them tobacco, alcohol, and firearms; and fights, inflamed by liquor, would end, as often as not, in gunfire. Thus the atmosphere, by the 1850s, was that of a frontier town, not unlike Copperopolis or Amarillo, full of high living and adventure (for the beachcombers, not the Pohnpeians), but also of violence, prostitution, exploitation, crime. With these outsiders descending on an immunologically naive population, disaster, in the form of infectious disease, could not be long in coming. Half the population was wiped out by smallpox in 1854 following the arrival of the American whaler *Delta*, which landed six infected men on the island; and this was soon followed by epidemics of influenza and measles.³⁴ Barely a seventh of the population was left by the 1880s, and they might not have survived had it not been for the Scottish, English, and American missionaries who had started

to come thirty years earlier, determined to bring morality to Pohnpei, turf out the beachcombers, stop sex and crime, and bring medical and spiritual aid to the beleaguered people of the island.

If the missionaries succeeded in saving Pohnpei physically (it was not totally destroyed, like Melville's valley of the Typee), it may have been at another, spiritual cost. The traders and beachcombers had seen Pohnpei as a rich prize to plunder and exploit; the missionaries saw it as a prize too: an island of simple hearts souls waiting to be converted and claimed for Christ and country. By 1880 there were fourteen churches on Pohnpei, dispensing an alien mythology, morality, and set of beliefs to hundreds of converts, including several of the local chiefs; missionaries had been sent to Pingelap and Mwoakil as well. And yet, as with the Marranos in Spain, the old religion was not so easily denied; and beneath the veneer of an almost universal conversion, many of the old rites, the old beliefs, remained.

While beachcombers and missionaries were fighting it out, Germany had been quietly building an empire in the Carolines, based especially on the marketing of coconut meat, copra; and in 1885 she laid claim to Pohnpei and all the Carolines—a claim which was immediately contested by Spain. When papal arbitration awarded the Carolines to Spain, Germany withdrew, and a brief period of Spanish hegemony began. The Spanish presence was passionately resented, and there were periodic rebellions, quickly suppressed. The colonists fortified their district of Mesenieng (now renamed La Colonia), surrounding themselves with a high stone wall, which by 1890 encircled much of the town. A good part of the old wall survives today (though much of it was destroyed by later colonists and by Allied bombing in 1944); this, along with the bell tower of the old Catholic

church, gave us some sense of La Colonia as it must have been a century ago.

Spanish rule in the Carolines was ended by the Spanish-American War, and the whole of Micronesia was sold to Germany for four million dollars (apart from Guam, which remained in American hands). Determined to mold Pohnpei into a profitable colony, the Germans instituted large agricultural schemes, uprooting acres of native flora to plant coconut trees and employing forced labor to build roads and public works. German administrators moved into the town, which they now renamed Kolonia.

A blow-up finally occurred in 1910, when the resentful people of Sokehs province gunned down the tyrannical new German district administrator and his assistant, along with two of their overseers. Reprisals were swift in coming: the entire population of Sokehs had its land confiscated, many were killed or exiled to other islands, the young men being sent to labor in the phosphate mines of Nauru, from which they returned, if at all, broken and destitute, a decade later. We were intensely conscious, wherever we walked, of Sokehs Rock—it looms massively to the northwest and forces itself upon the eye at every point in Kolonia—a reminder of the brutal German occupation and the hopeless uprising of the rebels, whose mass grave, we were told, lay just outside town.

We found oddly few reminders of the Japanese occupation, though of all the occupations, this most transformed Kolonia. It was difficult to visualize, as we wandered through the run-down, slow-paced town, the bustling place it had been in the 1930s, in the heyday of the Japanese occupation. Its population then had been swelled by ten thousand Japanese immigrants, and it was a thriving business and cultural center, full of com-

merce and recreation (including, I read, some twenty restaurants, fifteen dispensers of Japanese medicines, and nine brothels). The Pohnpeians themselves enjoyed little of these riches, and indeed were strictly segregated, with contact between Pohnpeian men and Japanese women totally prohibited.

The mark of occupation, of desecration, of conversion and exploitation, has been imprinted not only on the place, but on the identities of those who live here. There is another Colonia a few hundred miles away, on the island of Yap—there are Colonias and Colonias all over Micronesia—and one elderly citizen there, when questioned by E. J. Kahn some years ago, said: "You know, we've learned in our day to be Spanish, and we've learned to be German, and we've learned to be Japanese, and now we're learning to be American—what should we be preparing to learn to be next?"

The following day we set off for the rain forest with a botanist friend of Greg's, Bill Raynor, and he brought along two Pohnpeian colleagues: Joakim, a medicine man, deeply knowledgeable about the native plants and their traditional uses, and Valentine, an expert on location, who seemed to know every inch of the island, where every plant was to be found, its favorite conditions, its relationship to all the other inhabitants of the ecosystem. Both men seemed to be born naturalists; in the West, they might have become doctors or botanists.³⁵ But here their powers had been molded by a different tradition—more concrete, less theoretical than ours, so that their knowledge was intimately bound up with the bodily and mental and spiritual balance of their people, with magic and myth, the sense that man and his environment were not separable, were one.

Bill himself came to Pohnpei as a volunteer Jesuit missionary,

prepared to teach the natives about agricultural management and plant conservation. He had arrived with a sort of arrogance, he told me, flushed with the hubris of Western science, and then had been astonished, humbled, by finding in the local medicine men a vastly detailed and systematic knowledge of the plants on the island—they recognized dozens of different ecosystems, from the mangrove swamps and seagrass beds to the dwarf forests at the summit. Every plant on the island, Bill said, was considered significant and sacred; the vast majority were seen as therapeutic. Much of this he had discounted as mere superstition when he came to Pohnpei, but now he was more inclined to think in anthropological terms, and to see what he had first called “superstition” as a highly developed “concrete science” (in Lévi-Strauss’ term), an immense system of knowledge and principles wholly different from his own.

Having come to teach, he found himself instead listening and learning, and after a while started to form fraternal or collegial relationships with the medicine men, so that their complementary knowledge and skills and attitudes could be joined. Such a working together is essential, he feels, the more so as Pohnpei is still formally owned by the *nahmwarkis*, and without their willing cooperation, nothing can be done. In particular, he believes, a comprehensive investigation of all the plants in Pohnpei is needed to see whether any have unique pharmacological properties—and it is urgent to do so now, before the plants themselves, and knowledge about them, become extinct.

It has been similar, in a way, in the matter of religion. Arriving as a missionary with a firm conviction of the primacy of Christianity, Bill was struck (as many of his fellow missionaries have been) by the moral clarity of those he came to convert. He fell in love with and married a Pohnpeian woman, and has a

whole clan now of Pohnpeian in-laws, as well as a fluent command of the language. He has lived here for sixteen years, and plans to remain for the rest of his life.⁸⁶

Islands were thought, in the eighteenth century, to be broken-off pieces of continent, or perhaps the peaks of submerged continents (and thus, in a sense, not islands at all but continuous with the main). The realization that for oceanic islands, at least, no such continuity existed—that they had risen as volcanoes from the depths of the ocean floor, and had never been part of the main, that they were *insulae*, insulated, in the most literal sense—was largely due to Darwin and Wallace and their observations of island fauna and flora. Volcanic islands, they made clear, had to start from scratch; every living creature on them had to make its way or be transported to them.⁸⁷ Thus, as Darwin noted, they often lacked entire classes of animals, such as mammals and amphibians; this was certainly true of Pohnpei, where there were no native mammals, other than a few species of bats.⁸⁸ The flora of oceanic islands was also quite restricted, compared to that of continents—though, because of the relatively ready dispersal of seeds and spores, not nearly to such a degree. Thus a considerable range of plants had made it to Pohnpei, and settled and survived, in the five million years that it had existed, and though the rain forest was not as rich as the Amazon’s, it was, nonetheless, quite remarkable—and no less sublime. But it was a rain forest of a peculiar sort, because many of the plants here occurred nowhere else in the world.

Bill brought this out, as we made our way through the dense vegetation: “Pohnpeians recognize and name about seven hundred different native plants, and, interestingly, these are the same seven hundred that a Western botanist would pick out as

separate species.” Of these, he said, about a hundred species were endemic—they had evolved on Pohnpei, and were unique to the island.³⁹ This was often stressed in the species names: thus there were *Garcinia pohnpensis*, *Clinostigma pohnpensis*, *Freyinetia pohnpensis*, and *Astronidium pohnpense*, as well as *Galearia pohnpensis*, a native orchid.

Pohnpei’s sister island, Kosrae, is a very beautiful and geologically similar high volcanic island, little more than three hundred miles away. You might expect Kosrae to have much the same flora as Pohnpei, said Bill, and many species are of course common to both. But Kosrae has its own endemic plants, unique to it, like Pohnpei. Though both islands are young in geological terms—Pohnpei is perhaps five million years old and Kosrae, much steeper, only two million—their flora have already diverged quite widely. The same roles, the same eco-niches, are filled with different species. Darwin had been “struck with wonder,” in the Galapagos, at the occurrence of unique yet analogous forms of life on contiguous islands; indeed this seemed to him, when he looked back on his voyage, the most central of all his observations, a clue to “that great fact—that mystery of mysteries—the first appearance of new beings on this earth.”

Bill pointed out a tree fern, *Cyathea nigricans*, with its massive trunk, twice my height, and a crown of long fronds overhead, some of them still unfurling in hairy croziers or fiddleheads. Another tree fern, *Cyathea pohnpense*, was now rather rare and grew only in the cloud forest, he added, but despite its name, it was not completely endemic, for it had also been found on Kosrae (*Cyathea nigricans*, similarly, had been found on both Pohnpei and Palau). The tree fern’s wood is prized for its strength, Joakim said, and used to build houses. Another giant fern, *Angiopteris evecta*, spread low to the ground, with twelve-foot

fronds arching, tentlike, from its short stubby base; and there were bird’s-nest ferns four feet or more in diameter, clinging high up to the tops of trees—a sight which reminded me of the magical forests of Australia. “People take these bird’s-nest ferns from the forest,” Valentine interjected, “and reattach them so they can grow, epiphytically, on pepper plants, sakau—the two of them together, tehlik and sakau, are a most prized gift.”

At the other extreme, Bill pointed out delicate club mosses sprouting on the base of a bird’s-nest fern—an epiphyte growing upon an epiphyte. These too, Joakim said, were traditional medicine (in my medical student days we used their spores, lycopodium powder, on rubber gloves—though it was subsequently found to be an irritant and carcinogen). But the strangest, perhaps—Bill had to search hard to find one—was a most delicate, iridescent, bluish-green filmy fern, *Trichomanes*. “It is said to be fluorescent,” he added. “It grows chiefly near the summit of the island, on the trunks of the moss-covered trees in the dwarf forest. The same name, didimwerék, is used for luminous fish.”⁴⁰

Here is a native palm, *Clinostigma pohnpensis*, Bill said—not so common here, but plentiful in the upland palm forests, where it is the dominant plant. Valentine told us the ancient story of how this palm, the kotop, had protected Pohnpei from invading warriors from Kosrae—seeing the hundreds of palms with their light-colored flowering stalks on the mountainside, the invaders had mistaken these for men’s skirts made from hibiscus bark. Thinking the island must be heavily defended, they withdrew. So the kotop saved Pohnpei, as the geese saved Rome.

Bill pointed out a dozen different trees used in making canoes. “This is the traditional one; the Pohnpeians call it dohng . . . but if lightness and size are desired, they use this one, sadak.”

The sadak tree he pointed out was more than a hundred feet high. There were many wonderful smells in the forest, from cinamon trees with their aromatic bark, to native koahnpwil trees with their powerful, resinous sap—these were unique to the island and useful, Joakim said, for stopping menstrual bleeding or dysentery and also to kindle fires.

The drizzling rain in which we had started had steadily mounted in intensity, and our path was rapidly becoming a stream of mud, so, reluctantly, we had to return. Bill commented on the many streams which traced down through the forest to the gully: "They used to be absolutely clear and transparent," he said. "Now look at them—turbid and brown." This was due, he said, to people clearing forest on the steep hills—illicitly, as this is a state preserve—to grow their own sakau. Once the trees and vines are cleared, the soil on the hills begins to crumble, and washes down into the streams. "I am all for sakau," said Bill. "I revere it . . . you could call it one of the moral vines which hold us together—but it is madness to uproot the forest to grow it."

There is no sakau in Pingelap; like alcohol, it is forbidden by the Congregationalist Church. But in Pohnpei, the drinking of sakau, once reserved only for those of royal blood, has now become virtually universal (indeed I wondered whether it was partly responsible for the lethargic pace of life here); the Catholic Church, more accommodating than the Congregationalist, accepts it as a legitimate form of sacrament.⁴¹ We had seen sakau bars in town and thatched, open-air bars all over the countryside—circular, or semicircular, with a great metate, or grinding stone (which the Pohnpeians call a peitehl) in the center, and we remained eager to try some ourselves.

We had been invited by a local physician and colleague of

Greg's, May Okahiro, to experience a traditional sakau ceremony that evening. It was a cloudless evening, and we got to her house at sunset, and settled into chairs on her deck, overlooking the Pacific. Three Pohnpeian men, wiry and muscular, arrived, carrying pepper roots and a sheaf of slimy inner bark from a hibiscus plant—a large peitehl awaited them in the courtyard. They chopped the roots into little pieces, and then started pounding those with heavy stones, in an intricate, syncopated rhythm like the one we heard across the water on our return from Nan Madol, a sound at once attention holding and hypnotic, because, like a river, it was both monotonous and ever changing. Then one man got up, went to get fresh water, and poured this in, a little at a time, to wet the pulpy mass in the metate, while his companions continued their complex, iridescent rhythm.

The roots were all macerated now, their lactones emulsified; the pulp was placed on the sinewy, glistening hibiscus bark, which was twisted around it to form a long, closely wound roll. The roll was wrung tighter and tighter, and the sakau exuded, viscous, reluctant, at its margins. This liquid was collected carefully in a coconut shell, and I was offered the first cup. Its appearance was nauseating—grey, slimy, turbid—but thinking of its spiritual effects, I emptied the cup. It went down easily, like an oyster, numbing my lips slightly as it did so.

More sakau was squeezed out of the hibiscus sheath, and a second cup of fluid obtained—it was offered to Knut, who took it in the proper way, hands crossed, palms up, and then quaffed it down. The cup, emptied and refilled half a dozen times, went to each person, according to a strict order of precedence. By the time it came back to me, the sakau was thinner. I was not wholly sorry, for a sense of such ease, such relaxation, had come on me

that I felt I could not stand, I had to sink into a chair. Similar symptoms seemed to have seized my companions—but such effects were expected, and there were chairs for us all.

The evening star was high above the horizon, brilliant against the near-violet backdrop of the night. Knut, next to me, was looking upward as well, and pointed out the polestar, Vega, Arc-turus, overhead. "These are the stars the Polynesians used," said Bob, "when they sailed in their proas across the firmament of space." A sense of their voyages, five thousand years of voyaging, rose up like a vision as he talked. I felt a sense of their history, all history, converging on us now, as we sat facing the ocean under the night sky. Pohnppei itself felt like a ship—May's house looked like a giant lantern, and the rocky prominence we were on like the prow of the ship. "What good chaps they are!" I thought, eyeing the others. "God's in his heaven and all's well with the world!"

Startled at this unctuous, mellifluous flow of thought—so far from my usual anxious, querulous frame of mind—I realized my face was set in a mild, vapid smile; and looking at my companions, I could see the same smile had them too. Only then did I realize that we were all stoned; but sweetly, mildly, so that one felt, so to speak, more nearly oneself.

I gazed at the sky once again, and suddenly a strange reversal or illusion occurred, so that instead of seeing the stars in the sky, I saw the sky, the night sky, hanging on the stars, and felt I was actually seeing Joyce's vision of "the heaventree of stars hung with humid nightblue fruit."⁴² And then, a second later, it was "normal" again. Something odd was going on in my visual cortex, I decided, a perceptual shift, a reversal of foreground and background—or was this a shift at a higher level, a conceptual or metaphorical one? Now the sky seemed full of shooting

stars—this, I assumed, was an effervescence in my cortex, and then Bob said, "Look—shooting stars!" Reality, metaphor, illusion, hallucination, seemed to be dissolving, merging into one another.

I tried to get up, but found I could not. There had been a gradually deepening numbness in my body, starting as a tingling and numbness in my mouth and lips, and now I no longer knew where my limbs were, or how I could get them to move. After a momentary alarm, I yielded to the feeling—a feeling which, uncomprehended, was frightening uncontrol, but which, now accepted, was delicious, floating, levitation. "Excellent!" I thought, the neurologist in me aroused. "I have read of this, and now I'm experiencing it. Lack of light touch, lack of proprioception—this must be what de-afferentation feels like." My companions, I saw, were all lying motionless in their chairs, levitating too, or perhaps asleep.

All of us, indeed, slept deeply and dreamlessly that night, and the next morning awoke crystal clear, refreshed. Clear, at least, cognitively and emotionally—though my eyes were still playing tricks, lingering effects, I presumed, of the sakau. I got up early and recorded these in my notebook:

Floating over coral-heads. Lips of giant clams, perseverating, filling whole visual field. Suddenly a blue blaze. Luminous blobs fall from it. I hear the falling blobs distinctly; amplifying, they fill my auditory sensorium. I realize it is my heartbeats, transformed, that I am hearing.

There is a certain motor and graphic facilitation, perseveration too. Extracting myself from the sea bottom, the clam lips, the blue falling blobs, I continue writing. Words speak themselves aloud in my mind. Not my usual writing,

but a rapid perseverative scrawl which at times more resembles cuneiform than English. The pen seems to have an impetus of its own—it is an effort to stop it once it has started.

These effects continue at breakfast, which I share with Knut.⁴³ A plate of bread, but the bread is pale grey. Stiff, shining, as if smeared with paint, or the thick, shiny, grey sludge of the sakau. Then, deliciously, liqueur chocolates—pentagonal, hexagonal, like the columns at Nan Madol. Ghost petals ray out from a flower on our table, like a halo around it; when it is moved, I observe, it leaves a slight train, a visual smear, reddish, in its wake. Watching a palm waving: I see a succession of stills, like a film run too slow, its continuity no longer maintained. And now, isolated images, scenes, project themselves on the table before me: our first moment on Pingelap, with dozens of laughing children running out of the forest; the great floodlit hoop of the fisherman's net, with a flying fish struggling, iridescent, inside it; the boy from Mand, running down the hill, visored, like a young knight, shouting, "I can see, I can see." And then, silhouetted against the heaventree of stars, three men round a peitelh, pounding sakau.

That evening we all packed up, sad to be leaving these islands. Bob would be returning directly to New York, and Knut heading back, by stages, to Norway. Bob and I had seen Knut at first as a charming, scholarly, slightly reserved colleague—an expert on, and exemplar of, a rare visual condition. Now, after our few weeks together, we saw all sorts of other dimensions: his omnivorous curiosity and sometimes unexpected passions (he was an expert on trams and narrow-gauge railways and was full

of recondite knowledge on these), his sense of humor and adventure, his cheerful adaptability. Having seen the difficulties which attend achromatopsia, especially in this climate—above all the sensitivity to light and inability to see fine detail—we had a renewed appreciation of Knut's determination, his boldness in making his way around new places, his openness to every situation despite his poor sight (perhaps indeed his resourcefulness and unerring sense of direction had been heightened in compensation for this). Reluctant to say goodbye, the three of us stayed up half the night, finishing off a bottle of gin which Greg had given us. Knut took out the cowrie necklace which Emma Edward had given him on Pingelap and, turning it over and over in his hands, started to reminisce about the trip. "To see an entire community of achromats has changed my entire perspective," he said. "I am still reeling from all of these experiences. This has been the most exciting and interesting journey I will ever make in my life."

When I asked him what stayed in his mind above all, he said, "The night fishing in Pingelap . . . that was fantastic." And then, in a sort of dreamlike litany, "The cloudscapes on the horizon, the clear sky, the decreasing light and deepening darkness, the nearly luminous surf at the coral reefs, the spectacular stars and Milky Way, and the shining flying fishes soaring over the water in the light from the torches." With an effort he pulled himself back from the night fishing, though not before adding, "I would have no trouble at all tracking and netting the fish—maybe I'm a born night fisher myself!"

But *was* Pingelap an island of the colorblind after all, an island of the Wellisian sort I had fantasied or hoped for? Such a place, in the full sense, would have to consist of achromatopes only, and to have been cut off from the rest of the world for gen-

erations. This was manifestly not the case with the island of Pingelap or the Pingelapese ghetto of Mand, where the achromatopes were diffused amid a larger population of color-normals.⁴⁴

Yet there was an obvious kinship—not just familial, but perceptual, cognitive—among the achromatopes we met on Pingelap and Pohnpei. There was an immediate understanding and sharing between them, a commonality of language and perception, which instantly extended to Knut as well. And everyone on Pingelap, colorblind or color-normal, knows about the maskun, knows that it is not only colorblindness that those affected must live with, but a painful intolerance of bright light and inability to see fine detail. When a Pingelapese baby starts to squint and turn away from the light, there is at least a cultural knowledge of his perceptual world, his special needs and strengths, even a mythology to explain it. In this sense, then, Pingelap is an island of the colorblind. No one born here with the maskun finds himself wholly isolated or misunderstood, which is the almost universal lot of people with congenital achromatopsia elsewhere in the world.

Knut and I each stopped in Berkeley, separately, on our way back from Pohnpei, to visit our achromatopic correspondent, Frances Futterman, and tell her what we had found on the island of the colorblind. She and Knut were especially excited to meet one another finally; Knut told me later that it was “an unforgettable and very stimulating experience—we had so much to talk about and so much to share with each other that we talked incessantly like excited children for several hours.”

Like many achromatopes in our society, Frances grew up with a severe degree of disability, for although her condition

was diagnosed relatively early, good visual aids were not available to her, and she was forced to remain indoors as much as possible, avoiding any situation with bright light. She had to contend with a great deal of misunderstanding, and isolation, from her peers. And perhaps most important, she had no contact with others of her kind, with anyone who could share and understand her experience of the world.

Did such isolation have to exist? Could there not be a sort of community of achromatopes who (even though geographically separated) were bound together by commonalities of experience, of knowledge, of sensibility, of perspective? Was it possible that even if there was no actual island of the colorblind, there might be a conceptual or metaphorical one? This was the vision which haunted Frances Futterman and inspired her, in 1993, to start an Achromatopsia Network, publishing monthly newsletters so that achromatopes all over the country—and potentially all over the world—could find each other; communicate, share their thoughts and experiences.

Her network and newsletter—and now a Web site on the Internet—have indeed been very successful, have done much to annul geographical distance and apartness. There are hundreds of members spread around the world—in New Zealand, Wales, Saudi Arabia, Canada, and now in Pohnpei too—and Frances is in contact with them all, by phone, fax, mail, Internet. Perhaps this new network, this island in cyberspace, is the true Island of the Colorblind.