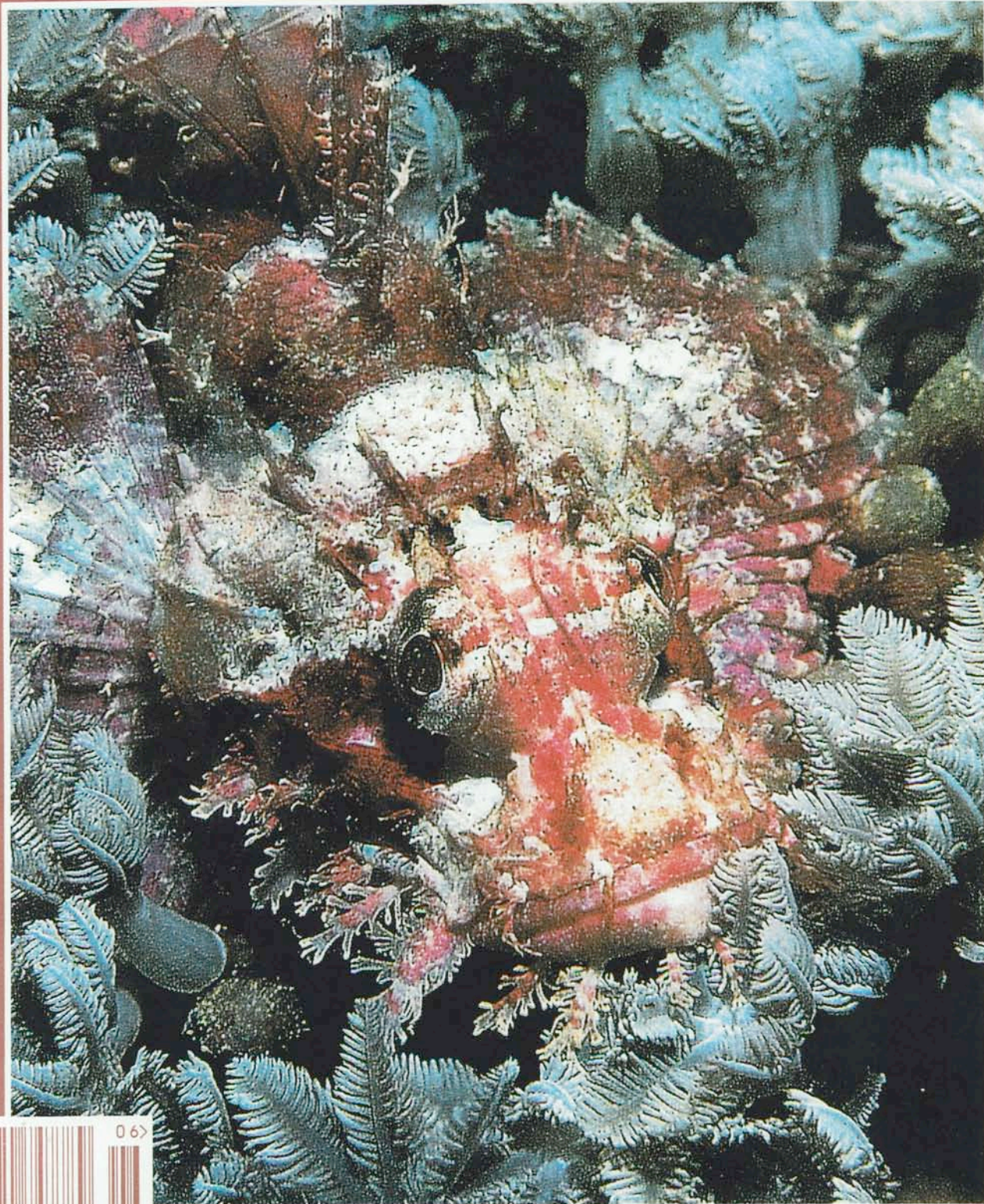


JUNE 1999

# Ocean Realm

INTERNATIONAL MAGAZINE OF THE SEA



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June, 1995

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For many of us, summer begins with the first swim, a seasonal rite of sorts, that first exhilarating dip into often still too-cool-waters. It's the one time of year when I am instantly transported back to childhood memories of long summer days spent along the Texas coast. Exploring long stretches of still pristine beach, I spent magic days swimming and crabbing and fishing and burning under the intense Texas summer sun. Indelibly etched into my memory as surely as the freckles burned into my back are early memories of the seashore, no doubt embroidered with the exhilaration of youth and seasoned generously with the wonderment of discovery.

Throughout life, I've been drawn to the sea. More than just a yearly summertime "calling," childhood fascinations have grown into a full-blown lifetime fervor for all things oceanic. As I reflect back over the years, it seems I've consistently, albeit perhaps unconsciously, found (or maybe even fabricated) reason to return again and again to the sea. And it really is the waters of the sea that beckon me: not lakes or rivers or ponds or pools. I've wondered and still wonder why.

There is no single answer—for me at least, rather abiding emotions must run as deep and as strong in my psyche as do currents in the depths of the ocean. It's as if a thread, a subtle tether to the sea, has somehow been woven through my life, shaping it, dyeing my subconscious with resplendent oceanic hues. The vibrantly glittering colors of the coral reef are but a small portion of this intricate fabric that cloaks my being. Shades that transcend the gaudiest Caribbean turquoise, the most flamboyant Pacific sunset, and the deepest indigos of the ancient world, punctuate my thoughts and color my mind's eye. Even sulky moody seas, whose gray-green froth-capped waves smash like tantrums onto the shore, hold a fascination that rivets my imagination. Their slaty opacity, veiling their treasures from view, taunts me.

The seawater that courses through our veins binds us all to our ancestral womb. For some of us, a summer frolic at the beach will suffice to rejuvenate our spirits and to reunite us with our oceanic beginnings. For others, our bonds to the sea are stronger. Without fail, as I approach the ocean, I can sense a change, outwardly and inwardly. Enveloped by the soft, damp salt-laden air, I often can *feel* the sea, smell it and taste it, long before it comes into sight. Once under this spell, my personal energies merge with those of the sea. I seem able to reach beyond myself, beyond the narrowly defined, ordered and bordered routine of daily life, to experience a "oneness:" not only with the sea, but with all life. Amazingly, the smaller I feel in relationship to the sea, the closer I come to being able to participate in its greatness, and the greater identification and kinship I feel for all creatures. Content in the realization that all of our lives are but a small part of a much greater, more meaningful whole, I am infused with renewed spirit; my "other" self, my "oceanic" self freed, and I am once and for all time, "at home."



Charlene deJori



Cheryl Schorp



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Photograph by Paul Humann

Vanuatu

A Tasseled Scorpionfish, *Scorpaenopsis oxycephal*, well camouflaged in a bed of fern corals, rests motionless while awaiting unsuspecting, close-passing prey.

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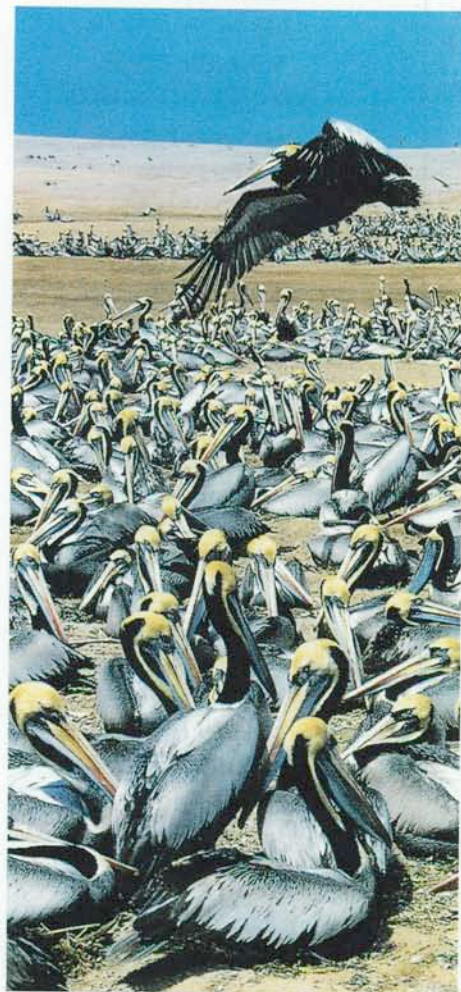
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Tui De Roy



A photograph of a person swimming underwater, viewed from below. The person's legs and feet are visible, wearing black fins. They are swimming horizontally, and a dolphin is swimming alongside them, its body partially visible above the person's legs. The water is a deep blue, and there is a bright, shimmering light source reflecting off the water's surface in the background.

# *Dolphins*

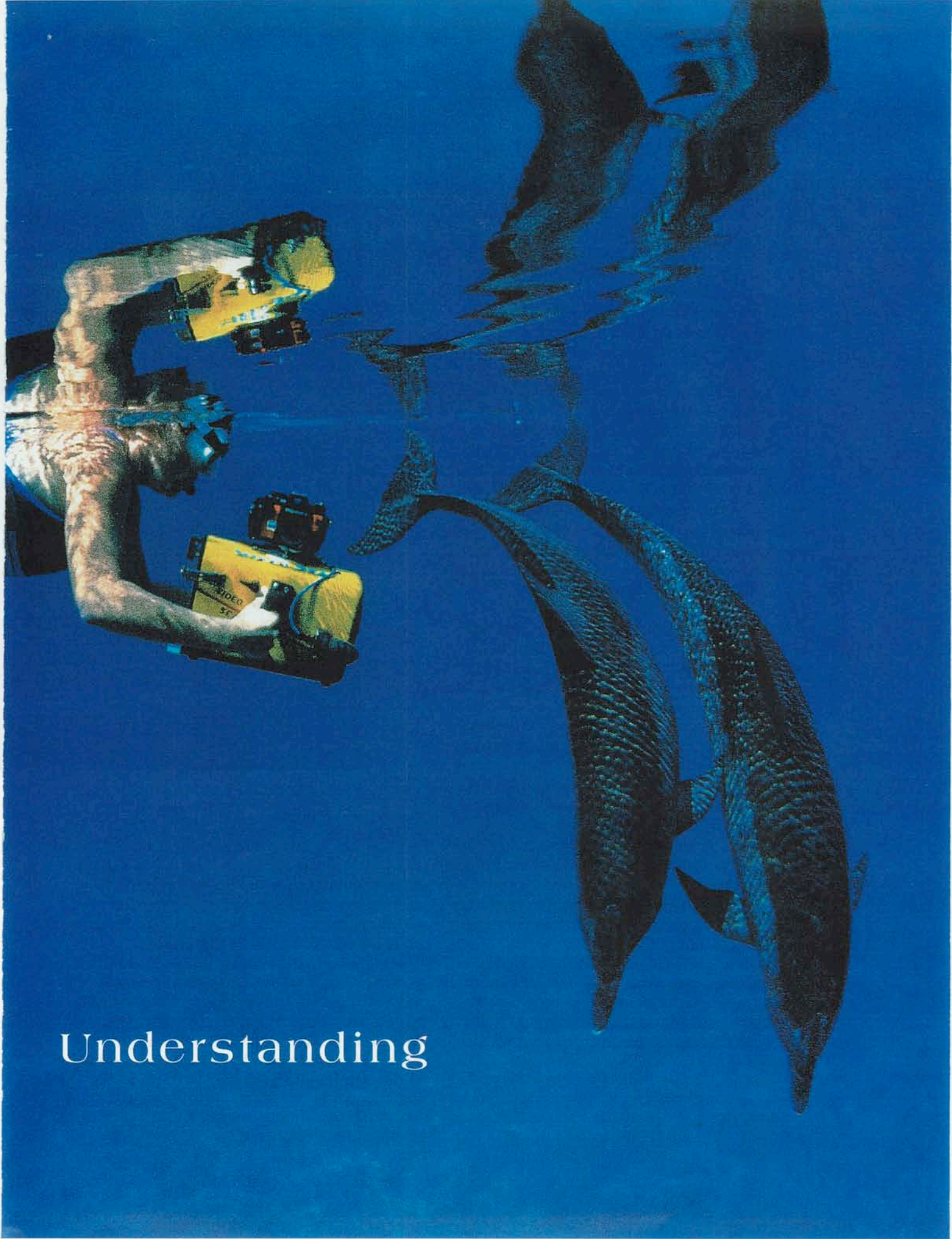
Focusing On An

By DENISE HERZING

Photographs by FLIP NICKLIN / MINDEN PICTURES







Understanding



## Dolphin Diversity

A flat calm day has settled in the Bahamas. Suddenly a loud blow alerts me to the presence of dolphins. These aren't generic dolphins, but specific individual Atlantic spotted dolphins, *Stenella frontalis*, I've known and studied since 1985. Although I've identified over 100 individuals in this pod, only a small subgroup has arrived, including Stubby, an adult male, Little Gash and Little Hali, mother and infant, and five juveniles who accompany them. As I slip into the water with my video and sound camera, I remember the first time I met these dolphins in the wild.

It was in 1985, and I was a graduate student, looking for a long-term field site where I could study dolphin communication. I came prepared to observe this pod, using the tools of science through video and sound recordings. What I wasn't prepared for was the mutual curiosity that the dolphins had for humans and the lessons of etiquette and ethics that would develop over the years. Here was a free-ranging social pod of dolphins—not lone bottlenose dolphins known to seek out companionship with humans, but a pod with their social integrity intact, curious about us, as we were about them.

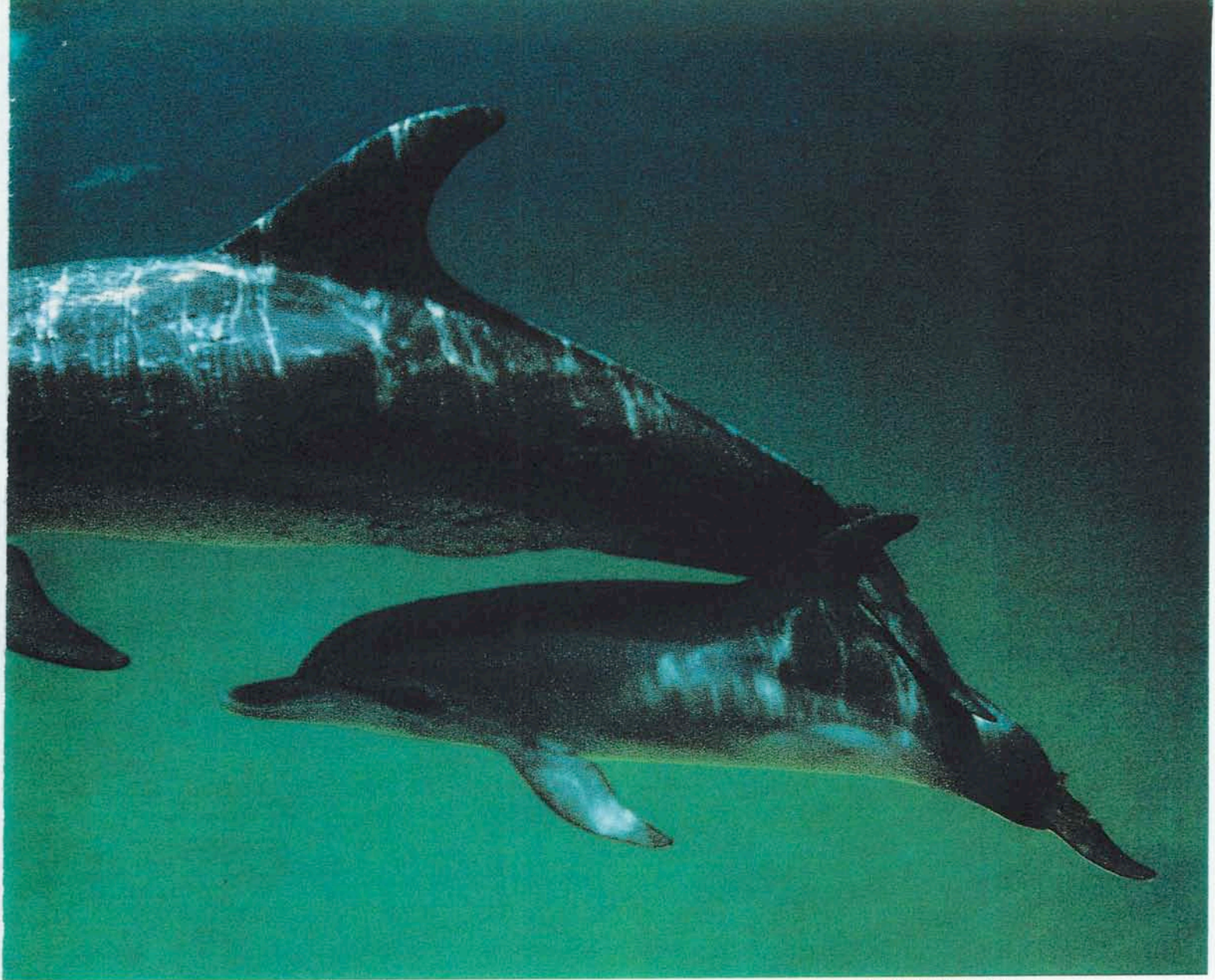
All dolphins are cetaceans, a diverse order of mammals that inhabits many aquatic environments, including polar, tropical, and freshwater rivers. The dolphin family, Delphinida, is the most recently evolved and contains over thirty species with complex social structures and communication systems. We first learned about dolphins in the 1950s from stranded and captive specimens. In the 1990s our knowledge is broad enough to know that dolphins are long-lived social mammals, that they form long-term bonds, and that they learn and grow in their multi-generational societies and use many senses to communicate, especially sound.

Most of us are familiar with the bottlenose dolphin, *Tursiops truncatus*, because it has been the species most adaptable and trainable in captivity. Observing free-ranging offshore dolphins is difficult for a variety of reasons, including accessibility and clear water for underwater observations. The Bahamas is one place where we can observe the lives of dolphins underwater. Observing dolphins is like observing icebergs: the majority of their activity is underwater, not at the surface.

Since dolphins are long-lived cultural mammals, following their life histories is critical for an understanding of their society. This includes tracking individuals through age and class changes, following reproductive cycles of females, and monitoring developmental associations of maturing dolphins. Young spotted dolphins stay with their mother until she has another offspring (the average interval is four and one-half years). These long years of parental investment, by both males and females, give young dolphins access to many generations of information and experience. This information gives us small pieces of the complicated story of their society.







Flip Nicklin/Minden Pictures

I am constantly amazed at the complexity of the dolphins' learning, and how much time older dolphins invest in training or engaging younger dolphins in the finer skills of life. It is not unusual to see an adult male engaging a young male in mock-fighting, with his mother nearby. Before the age of three, young male spotted dolphins are exposed to and participate in activities with older males who themselves have had tight coalitions for years. Female spotted dolphins, likewise, are participants in activities such as babysitting and learning how to care for and monitor younger dolphins. This helps them mature and grow into adults, aware of all the rules and responsibilities of a cooperative society.

Within this finely tuned social structure is a complex system of communication that is rich with sounds, postures, touch, and movement, as well as being contextual. For example, a tail slap at the surface may be used to get the attention of young dolphins or to signal annoyance. It may depend on the audience (who is there) and the nature of the relationship to the group (is it a babysitter signaling departure, or a female expressing her annoyance at unwelcome sexual advances?). Each element and relationship within this society adds to the complexity of this system. The only place we will be able to learn how dolphins use their communication skills within their social group is in their natural environment.





## *Etiquette and Relationships*

**F**ree-ranging Atlantic spotted dolphins who come and go on their own time have afforded us *Homo sapiens* the opportunity to become observers of their lives in the wild. They are the ones that choose to interact with us or allow us the opportunity to drift along with them and observe their behavior. Not every dolphin in the wild wants to make contact with humans, and we should look for situations that are mutually beneficial and that the dolphins initiate. I still battle with issues of etiquette in my own work, including touching, playing, and socializing, which are all aspects of the dolphins' lives of which we are all aware. But how involved should we get as researchers or as humans?

Primary to my work has been an understanding of how important it is to respect individual dolphins, their own social rules, and the integrity of their culture. The myth that every wild dolphin wants to make contact with humans is perpetuated by the image we gain from dolphins that have been trained to perform for us. Most wild dolphins have complicated and interesting lives to engage in without us. Of course there have been stories for centuries, dating back to Aristotle, about wild dolphins seeking out human contact. It may therefore be important to honor the phenomenon of mutual contact, but only if we can respect them and restrain ourselves from impacting negatively on their lives.





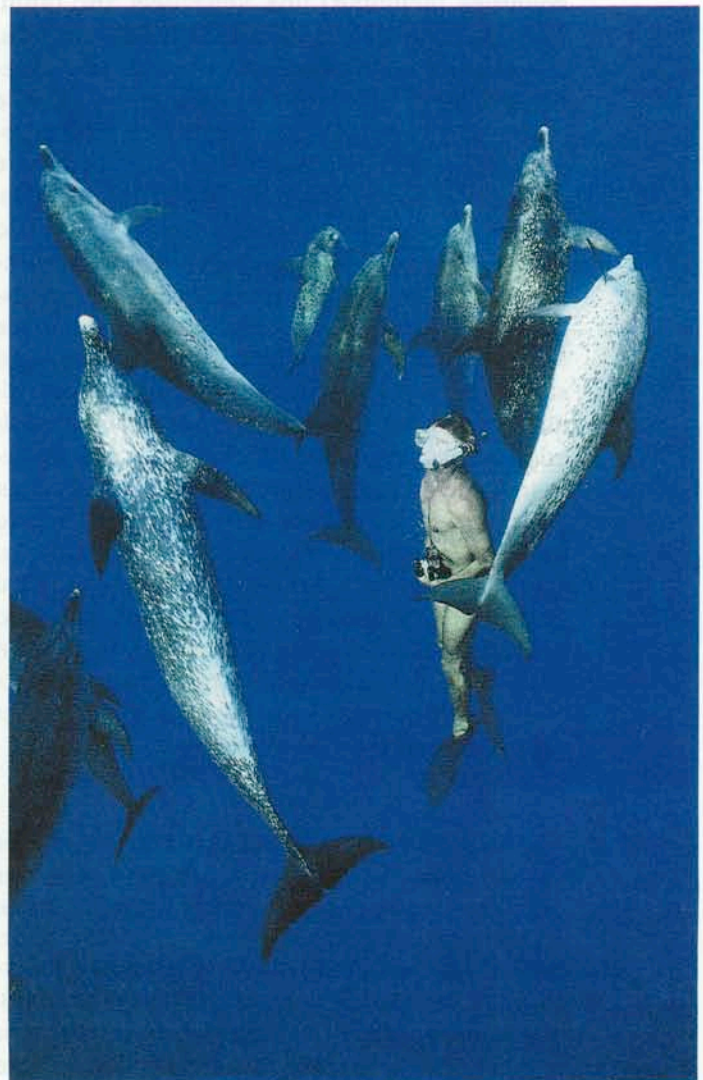
Flip Nicklin/Minden Pictures (both)

**W**e humans assume the right to many things in our lives. The 1980s were affectionately called "the decade of greed." As we continue into the mid-1990s, many people are reassessing their real "needs" versus "greed." How much human impact can the Earth sustain? How does our relationship and etiquette with dolphins relate to the way we treat the Earth? I think it has some direct implications related to our desire to control nature rather than be in relationship with nature.

Our attraction to dolphins is not really understood. Some say it may be due to the human-like attributes dolphins express, including care-giving and altruism. Some say it is because they always

## *The Human Impact*

seem happy, a characteristic given them for their unshakable smile. My own thought is that dolphins represent one of many ways that humans connect closely with nature. Yet witness the recent human fatality from the interaction with a wild dolphin off the coast of Brazil. The first of its kind, this incident was apparently set off by overzealous swimmers who insisted on riding, harassing, and otherwise bothering this friendly dolphin. In other places in the world tourists poke and prod wild but friendly dolphins. Those of us who have seen the public with wild dolphins have often wondered why people haven't been hurt before. Most humans are not malicious, but they often lack self-restraint or the appropriate etiquette for interacting with wild animals.







Denise Herzing

## Affordance and Understanding

Ironically, the love of dolphins has promoted their continued capture from the wild. Industries leave the US to capture dolphins in non-regulated countries, including Cuba, Venezuela, and Tahiti, to create facilities where people, usually tourists, can connect to dolphins. But who is really benefiting in these situations? It is incomprehensible to me, when I see the complexity in the development of a young dolphin's life in the wild, that we still capture young dolphins for human purposes. This is analogous to taking a three-year-old human child away from its family. It breaks the integrity of their development as dolphins and disrupts the complex web of relationships within the remaining dolphin society. From a population standpoint it may not matter, but from an individual standpoint so characteristic of mammal societies, it does matter. What is the point of all the research and education if we haven't learned about dolphins' need to live in their own societies and families? Dolphins are intelligent, cultural, social mammals that need more than food and medical attention to survive. Are we teaching our young to be detached, setting no limits to our impact on earth? Perhaps we should be relearning that it is okay to be connected and feel passionate about nature—to feel for it, to grieve for it.

Harvard's E.O. Wilson speaks of the concept of "biophilia" or "the urge to affiliate with other forms of life." Biophilia has its roots in the deepest part of ourselves. It connects us to a place, to non-human animals, and to each other. It sustains the wildness in us, and ideally, wilderness. As scientists we have had our way in research for many decades, to experiment and do as we please

without regarding ethics in many instances. Plans for monitoring the ocean's temperature via high intensity sounds are hotly debated. Can we continue to use the environment as an experimental lab? This is not a dress rehearsal; this is it. DDT and PCB's were carelessly put into the cycle of our lives in the 1950s. Now we see the long-term consequences of not treading cautiously.

Humans also affect dolphins indirectly as well as directly. Pollution, something we all contribute to, is endangering many species and ecosystems. Viruses, bacteria, and other health problems are showing up all over the globe in dolphins and







Flip Nicklin/Minden Pictures

whales. In 1993 I observed the first signs of viral and bacterial infections in the spotted dolphins in the Bahamas. Compromised or weakened immune systems are indicators that an organism has lost an aspect of its wholeness and health. Stranded dolphins are being measured for large quantities of PCB's that pass, consequently, to their offspring through milk. Until we realize that we are in a web of relationship with the environment, we will fail to see that all these problems come into our health chain as well.

Affordance is a concept often used in speaking about the Earth and our environment. It refers

to being given an opportunity to participate on some level. This concept needs to be respected. Free-ranging dolphins may afford us the opportunity to learn about them. The Earth affords us the ability to exist, not the other way around. Sometimes I think that we have it backwards. It is not humans that take care of the Earth, but the Earth that sustains or does not sustain us. No matter how advanced our technology, we are not in control of nature, we are only part of the process. Our relationship with dolphins will be an indicator of our maturity as human beings in that process. □



