

DIVING BLIND

Robert R Given, PhD

First of all, let me tell you that I am not professionally orientated toward working with the blind or handicapped, although I do find it most interesting and rewarding. I am a marine Biologist, and in that capacity was asked some years ago to lead a group of children through an "intertidal experience". Now leading 50 children (ages 6-15) over wet rocks and trying to tell them something at the same time is challenge enough, but when they are in various stages of blindness, muteness and deafness, in addition to severe mental problems, I nearly gave up. Fortunately, there were many counsellors to keep them going and from hurting themselves, so I could concentrate on trying to show them something. My first impression was one of extreme disappointment, because they seemed to be paying absolutely no attention, and I thought I was getting nowhere. Then one of the student counsellors took me aside and explained to me just how these kids do respond, what to look for, how to get and capture their attention, even for a fleeting moment, and in essence to just "hang loose" and do what comes naturally. After that, it went beautifully - the kids would bring me things - anything - and we would talk about it until they lost interest, then go to something entirely different. I learned to live for that moment, and not to fret because they were not listening enraptured and taking copious notes, as I expect my university students to do. Later in talking again to the counsellors, they said that some of the kids had responded that had not shown any emotion in months. It was all in knowing what to look for in them, rather than in thinking of my own ego and how I thought they should react. The other thing that impressed me was how the kids look after each other, and even acted as "translators" for me to some child that was most interested in a crab or piece of seaweed but just couldn't understand what I was trying to show him. They seem very concerned about each other, and are always looking around to see that a friend is alright, or that they all saw the animal or plant being shown at the moment.

My experience with the blind has also been quite a learning experience for me. We have a very active Lions International Club here on Catalina, and as you know, Lions are sight-oriented. Several years ago, in co-operation with some local yachtsmen and the southern California blind organizations, a group of about 15 (10-20 years old) came to Catalina for a weekend. They rode horseback, milked a cow, and did some nature study. Then they visited our Marine Laboratory, where we had some seawater tanks set up with plants and animals that they could "see" (feel), guided on a one-to-one basis by our own sighted Students. They "looked" through microscopes, "saw" things in the tanks, asked about colors, shapes, "does it bite", etc.

As a result of the success of that, we decided to try something different last year. We heard that the local Braille Institute was teaching some of the blind kids to swim and snorkel dive. Their youth director and I worked out the idea of a "Braille Trail", so they could dive down and "see" the animals and plants, using their newly-acquired snorkelling skills. We particularly wanted them to lose any fear of the water, and of kelp or other things brushing against them underwater, so we decided to keep it shallow, even within "standing-up" depth, at least at first. Now this is all trial-and-error, remember, and I will point out our pitfalls and modifications as I continue my tale.

As a general plan, we decided to establish a series of 9 or 10 "stations" in the shallow water, over a rocky bottom in a sparse kelp bed. The stations were to be buoyed lines attached to the bottom, and connected to each other with a floating polypropylene line. The divers could move from one to the next, along

the lateral line, then dive down the buoyed line to the bottom and feel the animal or plant there.

Each station was composed of a rubber tyre inner tube, on the top of which had been lashed a 3 foot diameter plywood disk, to form a sort of raft. On this disk was taped a legend about the animal or plant to be "seen" there. One legend was done in braille, on waterproof paper, the other on the same paper in large type, for the partially sighted. The idea was that they would move along the line to each station, reach up and read or feel the legend, then dive down to the bottom of the line where the animal or plant would be waiting to be "seen". The setting up of the trail went well, and we had a long string laid out, with stations about 30 feet apart, in a line parallel to shore in about 5 or 6 feet of water. Then we sent a blind diver out - a sharp kid, about 12 years old - as a scout to run the trail and see what it was like. His comments were as follows:

1. Depth - fine.
2. Systems of lines and floats - good.
3. Braille legend could not be read-water was too cold (70°F) and fingertips got numb and insensitive (mistake #1).
4. Organisms supposed to be at bottom of line had moved away (mistake #2).

Another comment, which shows the sense of humor these people can have about their handicap - "water was murky and I couldn't see a thing!!" So, even with those comments, we sent the group of about 20 divers through anyhow (they had had about an hour in the laboratory, feeling and "seeing" the animals and plants in the aquaria, and being told what to look for). They had a great time, but all had about the same comments - could not read the braille, and the animals had moved away from the station. So we said, okay, why not help us figure out a way to do it so it works better. They really liked this, and after much messing around and conversation, we finally ended up with this. String a surface line out between two points - can be as long as you want. Have "rest" floats along the way. Blind students pair up with one of our sighted students, and they snorkel along the line together. When the sighted student sees something underwater, they dive down together, and the sighted student "shows" it (puts hand on it, or picks it up and hands it to) to the blind student. This put a very personal touch to it, and greatly simplified the logistics of fooling with the wooden disks, etc. This thing can be set up essentially anywhere, and any sighted person can be trained in a very short time to recognize the organisms. The pretraining in the laboratory is important.

This summer we plan to add another wrinkle - a couple of inflatable children's wading pools, filled with seawater and stocked with plants and animals, so the blind kids can sit around the edges and reach their hands and pick up the animals, turn them over, etc. Then, if they want to, they can go out on the "trail" and do it in real life. Again, Lions will be helping out, as will some of our local town kids and students from the Laboratory.

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#### Brief Profile

Robert Given is Assistant Director of the USC Marine Laboratory at Avalon, California. This article is taken from a letter describing his interest in blind children. A most remarkable achievement by both the sighted and handicapped participants is modestly revealed.