

Who Needs a Species Label?

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The educational goals of Rotterdam Zoo are to raise respect, even admiration, for the animal-as-it-is. This can in part be achieved by presenting interesting facts which stimulate wonder – the main aim for our species labels. Thus, our visitors are not given a standard list of biological facts (e.g. size, diet, Red List data, weight, distribution), but only the amazing and interesting traits of an animal. We never tell the obvious. But how effective are our species labels really? Evaluation would provide some important answers.



In 1990 two students joined the Education Department of Rotterdam Zoo to research species labels. They evaluated the effectiveness of the western lowland gorilla (*Gorilla gorilla gorilla*) species label and discovered that it was read by a mere 5% of the visitors. Independent of content or the amount of text on the label, on average only 30% of the information was actually read by visitors.

Colours

Sixteen years later one of the former students, now Head of Education at Rotterdam Zoo – Robert van Herk – decided it would be useful to do a similar investigation amongst today's zoo public centred on the question: Do visitors read species labels and how effective are they in achieving Zoo goals?

Research was carried out by a student whom unfortunately suffered many setbacks which frustrated the evaluation process, i.e.:

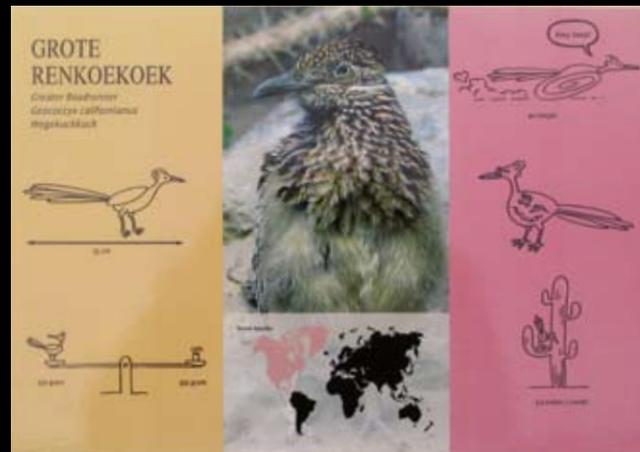
- the removal of the species from the enclosure during the investigations
- logistic changes in visitors' movements

- bad weather conditions
- wrong time of the year (too few or too many visitors)
- highly visible investigators
- the unexpected appearance of new signs/panels/ guided groups/display
- other attractive signs/panels/displays nearby

These were pitfalls to be avoided in any further research! However, she did discover that a key factor in making species labels more attractive was the right use of colours! Colourful species labels attracted more attention than labels in a single colour.

Text vs. cartoons

A new research took place in the winter of 2007. Two students made two species labels for the greater roadrunner (*Geococcyx californianus*); one with mainly text (plus a species photo and a distribution map), the other with mainly cartoons (and a photo and very short texts). These labels were of a similar, colourful design. The contents of both labels were identical. The roadrunner does not have a very interesting appearance; not interesting enough to attract the full



attention of the visitor. However, the bird has some quite interesting qualities which can easily be interpreted and illustrated. One automatically passes its enclosure on visiting the Oceanium (a main attraction of the Zoo). The enclosure design arouses curiosity to discover what animal it houses. There is enough space for the researchers to see what visitors do and to take them aside to ask some questions. These favourable circumstances determined the choice of species label to be evaluated.

First, the 'cartoon label' was placed next to the roadrunner's viewing window (note that there was no other label in sight). The researchers counted and observed the visitors. The first 50 visitors who looked at the label were interviewed. Next, the cartoon label was changed to the 'text label' and the process was repeated. The results were disappointing! 3797 visitors passed by, many looked at the roadrunner but only 50 read the text label (1.3%). Slightly less disappointing: 2381 visitors passed, many looked at the roadrunner and 50 of them looked at the cartoon label (2.1%). Conclusion: the vast majority of visitors do not read the labels.

Perhaps the roadrunner and its enclosure were so interesting that they distract from the label? Our guess was that the label was not in the right place!

One of the questions the students asked – "Which would you prefer: a text label, a cartoon label or a combination of the two?" – conveyed that 44% of the text label 'readers' preferred a text label, 8% an illustrated label and 44% a combination of the two (4% had no opinion). Whereas, 8% of the cartoon label 'watchers' preferred a text label, 20% an illustrated label and 70% a combination (2% had no opinion).

Interestingly, 88% of the 'readers' were older than 30 years as to 50% of the 'watchers'. Thus, the watchers group was considerably younger: 30% was even younger than 16 years. The male/female ratio was more or less even. The level of education between 'watchers' and 'readers' differed: 54% of the watchers had a higher professional or university education as to 80% of the readers.

Another important question was: "Could you tell me something about the roadrunner?". People could

mention eight different items that were explained on both species labels. There were striking differences between answers from watchers and readers (see table 1).

Table 1. Reproducing roadrunner facts.

| Label/visitor type | Cartoon/watcher | Text/reader |
|--------------------|-------------------|--------------------|
| Weight | 30x | 7x |
| Speed | 34x | 34x |
| Length | 11x | 7x |
| Breeding time | 10x | 3x |
| Environment | 2x | 11x |
| Food | 3x | 17x |
| Movie | 7x | 16x |
| Nesting place | 2x | 7x |
| TOTAL | 99 answers | 102 answers |

Unfortunately, we do not know what knowledge our respondents had before they visited the roadrunner so we cannot tell what they actually learned from our species labels. However, many respondents spontaneously said “I didn’t know that a roadrunner... (is so fast / eats scorpions / breeds in a cactus / etc.)”. Nevertheless, let us assume that any given answer enlarges the admiration of the respondent for the species.

We already concluded that visitors prefer colourful labels with texts and cartoons. We could now also conclude that some messages are more suitable for text and some are better for cartoons, and some are fit for both. Thus, if we want to direct messages to children and young adults, we might use more cartoons. If we want to direct messages to older adults then text labels would be preferable.

Label location

It was clear that many respondents preferred cartoon labels. A follow-up research was carried out. A group of five students researched whether photos or drawings should be used instead of cartoons, and which of the two was more effective. To be able to compare the results to that of the previous research, the students commenced with the roadrunner. But they did not have much time to observe and ask questions. The result was that they only got two completed questionnaires after a four-hour wait! Then they started experimenting. In doing so, they made their investigation worthless but at the same time they found out how important the location of a species label was.

The roadrunner label was attached to the wall next to the enclosure. Visitors leaving the enclosure could see it. It was situated at mid-body level. Above the roadrunner label, there was a label of the burrowing owl (*Athya cunicularia*) attached at eye level which



attracted all the attention! Only two persons in a wheel chair and a mother with small children spotted the roadrunner label!! Perhaps they considered the live owl more attractive than the live roadrunner?

Unfortunately, the exact number of visitors viewing the enclosure was not recorded though probably averaged 450 persons.

Before reaching the enclosure, visitors would pass by an interactive where one is invited to turn a switch to remove a big ‘?’ for an answer. Approximately 90% (a guess, as it was not recorded properly) of the visitors played this game. The by now frustrated students removed the roadrunner label and placed it exactly in the middle of the window pane, right in front of the enclosure. No visitor could miss it and about 40% of visitors looked at it for at least more than a second.

Position and lighting

In the mean time – elsewhere in the Oceanium – one of my colleagues carried out her own study. Amongst other things she discovered that at a certain aquarium 11% of passing visitors checked the species label; this was 18% of visitors who actually looked at



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the aquarium (compare this to the 1.3% mentioned at the beginning of this article)!

This 'super-attractive species label' was attached just above and adjacent to the aquarium window and was illuminated by a spotlight. The aquarium itself is very attractive and contains several colourful fishes. I assume that visitors were curious to know the inhabitants' names.

At another aquarium 8.7% of passing visitors checked the label – which was 27.1% of the visitors who actually looked at the aquarium (note that not every passing visitor looked at the aquarium).

The five frustrated students (their investigations not being scientifically sound, with terms like 'many' used instead of numbers) decided to continue their investigations at the Komodo dragon (*Varanus komodoensis*) exhibit. The species label was located above the enclosure's window and was illuminated by a spotlight. Other labels and panels nearby were covered by the students. Within a few days they had sufficient data to conclude their study: many people looked at the species label, many even read most of it. The students

observed children standing in front of the label for several minutes, heads lifted to read all the information on the Komodo dragon!

In conclusion, my advise is to:

- Don't expect too much attention from the public for your species labels
- Direct your efforts to attractive animals and enclosures; don't spend much energy on inconspicuous animals
- Make labels colourful and mix texts with cartoons and drawings
- Think well about where you attach your species label; place it within sight of the visitor who stands in front of the enclosure, and place it at eye-level or higher
- Make sure that no other nice displays such as interactive panels are near to your species label to distract from it
- Put a spotlight on your label. ♦

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