

each hypothesis remain, and are likely to remain for some time.”¹³

Of course, creationists do not have a paradox with a faint young sun because the solar system is young. Moreover, the failed solutions to the paradox provide one more reason why the solar system is young.²

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Defining terms— John Endler’s refreshing clarity about ‘natural selection’

David Catchpoole

Long-time readers of this Journal would know, in relation to natural selection and evolution, that:

- Natural selection is a fact—it was recognized by creationists before Darwin, as it is by informed creationists today.^{1,2}
- Natural selection favours certain *already-existing* genetic traits in populations by *culling* genes out of the gene pool; thus it helps *adaptation* of a population to its environment. (Sometimes the new population is given a new *species* name—adaptation and speciation are accepted by informed creationists.)³
- Natural selection by itself generates *no new genetic information*. So any adaptations that are purely the result of natural selection acting on pre-existing genetic information are not changes in the right direction to drive particles-to-people evolution.⁴ So, *natural selection is not the same thing as evolution!*⁵

However, proponents of evolution repeatedly cite examples of natural selection—examples in which populations *lose* genetic information—as evidence of microbes-to-man evolution (which would require an *increase* in genetic information). This is clearly unjustified.

The evolutionists’ vague and ambiguous definition of terms facilitates their frequent use of the bait-and-switch tactic.⁶ In theory, evolutionists look to *mutations* as being the process responsible for generating the new genetic information evolution requires, which is then sorted by natural selection. But when pressed

to give specific evidence of mutations that *increase* the information in the genome, evolutionists struggle to give coherent answers.⁷ They ought to be able to point to *hundreds of examples* of such mutations by now. But they can’t. There is at best a tiny handful—one or two to our current knowledge—which could represent a modicum of information increase, and the lead candidate, the ability of a bacterium to digest the man-made substance nylon, involves considerable doubt.⁸

Only a very few evolutionists have been upfront about this. However, they have been largely ignored. Our attention was recently drawn (see box) to one such evolutionist, Dr John Endler, whose 1986 book *Natural*

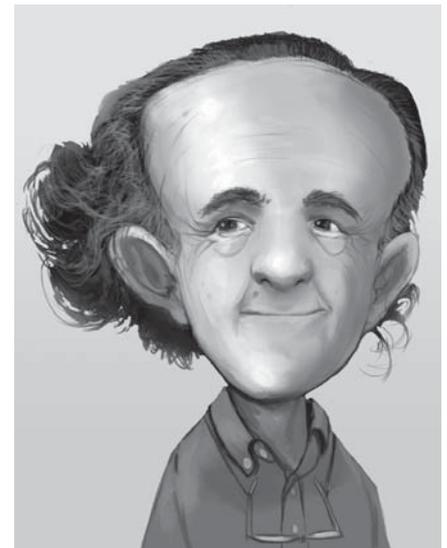


Illustration by Caleb Salisbury

Figure 1. Dr John Endler, an evolutionist, has impressive academic credentials. Born in Canada, Endler has a Ph.D. from Scotland’s Edinburgh University and subsequent research and professorial experience at the University of California, USA, as well as Australia’s James Cook University and Deakin University, and England’s University of Exeter. In 2007 he was elected as a Fellow of the American Academy of Arts and Sciences. In 2008 the European Research Council announced that he was among the first cohort of Life Scientists to receive an award under its Advanced Grants scheme. His fellow evolutionists are happy to cite Endler’s research work on natural selection and adaptation in guppies but have all but ignored key observations in his definitive 1986 book, *Natural Selection in the Wild*.⁹



Photography by Marrabbio2, courtesy of www.wikipedia.org

Figure 2. John Endler is credited with having rediscovered in 1975 the colourful fish now named Endler’s guppy, or Endler’s livebearer, in his honour. (Although first recorded in 1937, in Venezuela, Endler was the first to properly study and document it.) The live specimens of *Poecilia wingei* that Endler collected himself were the first examples of this fish to make it to the aquarium trade.

*Selection in the Wild*⁹ spelt out the problem clearly.

Endler’s *book* may have been ignored, but Endler and his *research papers* have not. E.g. leading evolutionist Richard Dawkins happily cites Endler’s famous research on natural selection and adaptation in guppies—but this is a classic example of the aforementioned ‘bait-and-switch’.^{10,11}

Identifying the confusion

In *Natural Selection in the Wild*, Endler beautifully identifies the inherent confusion about the key terms which we would say enables Dawkins and other outspoken evolutionists to so often go publicly unchallenged:

“A major problem in this subject is that there is a multiplicity of meanings for the same terms, and the same terms mean different things to different people” (p xii).

And Endler makes it clear that the confusion is not just at a public layman level, but also in the scientific

community and their technical publications:

“The term ‘natural selection’ means different things to different people, and this often leads to confusion in the literature” (p. 8).

The gist of the problem (just as we point out repeatedly) is that people wrongly use ‘natural selection’ and ‘evolution’ interchangeably, and Endler specifically warns against this:

“Natural selection must not be equated with evolution, though the two are intimately related” (p. 8).

Evolutionist Endler refreshingly candid

Note that Endler is no creationist, as is clear from his pro-evolution commentary throughout. But he toes the evolutionary line that natural selection is a key component of the microbes-to-man process, and also candidly admits that natural selection is insufficient by itself to explain how pond scum became people:

“Natural selection is common enough in natural populations to have been detected in a wide variety of organisms, and strong selection is not as rare as has been previously assumed; natural selection is therefore likely to be important in evolution. *However, natural selection does not explain the origin of new variants, only the process of changes in their frequency* [Emphasis added]” (p. 245).

Many times Endler is upfront about this difficulty, i.e. that those who use the term ‘evolution’ cannot sidestep the problem of the *origin* of the genetic variation; how the variants came into existence in the first place. He thus defines evolution:

“Evolution may be defined as any net directional change or any cumulative change in the characteristics of organisms or populations over many generations ... It explicitly includes the *origin* as well as the *spread* of alleles, variants, trait values or character states” (p. 5).

The ambiguity of the terms, however, means that many do indeed sidestep the issue:

“To put this usage into a broader perspective, those who restrict ‘natural selection’ to phenotypic selection also call natural selection, as defined in this book, ‘evolution’; those who are more careful call it ‘evolution by natural selection.’ *But evolution is more than merely a change in trait distributions or allele frequencies; it also includes the origin of the variation* [Emphasis added—note that ‘alleles’ are alternative forms of the same gene, e.g. a gene for hair may have versions that code for long or short hair respectively]” (p. 14).

And some not only blithely avoid the challenge, but deliberately seek to redefine the terms in order to define the origins problem out of their sphere of operation:

“Population geneticists use a different definition of evolution:

Proving Endler’s point

A 2010 *New Scientist* article by Professor Keith Bennett (Queen’s University, Belfast) alerted us to evolutionary biologist John Endler’s 1986 book *Natural Selection in the Wild*, saying that it chronicled how Endler had “scrutinised claimed examples of natural selection but found a surprising lack of hard evidence.”¹⁶

To our surprise, however, the opposite was true; Endler provided much evidence of real natural selection taking place—but he did highlight a ‘surprising lack of hard evidence’ that this resulted in any evolution. So, it is almost certain that Bennett was using ‘natural selection’ as if it meant the same as ‘evolution’. Ironically, then, in the very act of favourably citing Endler’s book, Bennett seems to have done the very thing that Endler’s book warns against—something that was probably lost on the majority of *New Scientist* readers. No wonder confusion reigns.

a change in allele frequencies among generations. This meaning is quite different from the original; it now includes random as well as directional changes, but it does not require the origin of new forms” (p. 7).

In other words, whether the change goes uphill, or downhill, or just back-and-forth aimlessly, it is all still called ‘evolution’ by population geneticists. Endler goes on:

“Unfortunately, the use of the population genetics definition often results in an overemphasis on changes in allele frequencies and an underemphasis on (or no consideration of) the *origin* of the different alleles and their properties. Both are important in evolution” (p. 7).

Note his insightful analysis that defining the terms in that manner results in “an underemphasis on (or no consideration of) the *origin* of the different alleles [Emphasis added]”. Just how little consideration has been given to this issue by evolutionists is evident in this highly significant observation by Endler:

“Thus natural selection may affect the patterns of the origins of *combinations* of traits, even though *it will not explain the mechanisms of their origins*. This was tangentially discussed by Fisher (1930),¹² Simpson (1944),¹³ and Rensch (1959),¹⁴ but has received virtually no attention since then. It would repay further study [Emphasis added]” (p. 246).

So, ‘tangentially’ discussed by notable evolutionists in 1930, 1944 and 1959, and here by Endler in 1986. And since Endler? His words in 1986 still ring true today: “virtually no attention since then.” And the issue sorely is in need of the “further study” by evolutionists that Endler identifies:

“... a fundamental understanding of the origin of new variants would allow us to address how morphological and genetic changes actually take place, as well as how they affect the rate and direction of evolution. Natural selection only

affects changes in the frequency of the variants once they appear; it cannot directly address the reasons for the existence of the variants” (p. 241).

Silence rings out ... and doublespeak remains

But is this key problem for evolutionists *ever* likely to get the consideration Endler says it warrants? Not if the dearth of attention since Endler’s book in 1986 is any guide. And Endler probably had fair warning that his attempt to clarify ‘natural selection’ was unlikely to be enthusiastically heralded by his own evolutionist colleagues. In the preface, he conceded about his book that “I expect that nobody will find it wholly satisfactory”, going on to explain:

“Among the many people who have read it in manuscript, some find parts exceedingly helpful, while others find the very same parts boring or superfluous. To many *the most irritating parts* will probably be found in Chapters 1, 2 and 8 because they attempt to put the various points-of-view, *definitions, and meanings of natural selection* in perspective, and everyone thinks that his own emphasis is most important. *A typical reaction is: ‘I find it fascinating that more than 100 years after the Origin and Mendel there can be two major positions on this everyday phrase’* [Emphasis added]” (pp. xi–xii).

So, in context of the creation/evolution controversy, the battleground is still very much raging around the ‘terms’ of the debate, i.e. the *definition* of the terms themselves. As astute observers have noted, “Whoever defines the terms, wins the debate.”

From the evolutionists, then, we can no doubt expect ‘muddy waters’¹⁵ for some time yet.

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