



It seemed desirable to seek for further confirmation of the truth of Fritz Müller's interpretation, and this the lecturer has made it his business to do. It appeared to him that if the Müllerian theory were valid, certain consequences ought to follow. Did these consequences follow or did they not?

(1) It is obvious that in Batesian or true mimicry the advantage is all on the side of the mimic. Experience gained by tasting the mimic would be used to the injury of the model. While therefore there is every inducement for the mimic to seek safety by approaching nearer and nearer to the aspect of the model, there is no reason for the model to assimilate itself to the mimic, but rather the contrary.

In a Müllerian association, on the other hand, the benefit is mutual. Each fresh accession to the group is a source of strength, not of weakness. Everything is in favour of the formation of such groups as rapidly and on as large a scale as possible; hence there is nothing to impede, and everything to promote, the free interchange of characters all round, each member being able to act, so to speak, as both mimic and model. This could not happen, as has been shown, in the case of Batesian mimicry.

Several instances of such reciprocity or interchange of features have been detected by the lecturer, and others have since come to light. From what has gone before, it is clear that such cases, inexplicable on any other theory, tend to establish the validity of the Müllerian hypothesis.

(2) A further consequence of the mutual influence exercised by the constituents of a Müllerian group is this: it ought sometimes to happen that two species, though both influenced in common by a third, will show a nearer approach to each other than either does to the common model. As a matter of fact this is found actually to occur in Nature, and fresh evidence is thus supplied for the validity of the Müllerian interpretation. This phenomenon, again, could not happen in Batesian mimicry. Two true or Batesian mimics of the same model could not influence each other; they could only be influenced in common by their model.

(3) Finally, the fact that each distasteful form is capable of affording protection to forms on each side of it may be expected to favour the existence of gradational groups; distasteful forms, with perhaps little or no resemblance between them, being held together, as it were, by a chain of distasteful intermediates. This also has been found to be the case, many of the mimetic groups in a given zoological region forming together a kind of nexus, each node of which may be occupied by a dominant group or species showing a very different colour-scheme from the occupants of the other nodes, while the uniting strands of the network are constituted by a more or less completely gradated series of transitional forms.

It will be seen from the foregoing how far we have advanced beyond the original conception of Bates, and it must be allowed to be a striking fact that the progress of recent investigation has uniformly tended to supply fresh confirmation of those developments of the theory of mimicry which have traced their origin from the fertile suggestion of Fritz Müller.

