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Remark to „The Distinction of the Dutch Green Woodpecker"

(with one figure)

by

Dr G. H. JONKER

The interesting measurements on the wing length of the Dutch Green Woodpecker given by Hens and van Heurn (Limosa **19**, 1946, pp. 1—15) gave me the opportunity to show how one can gain a much clearer insight by applying a graphical-statistical method.

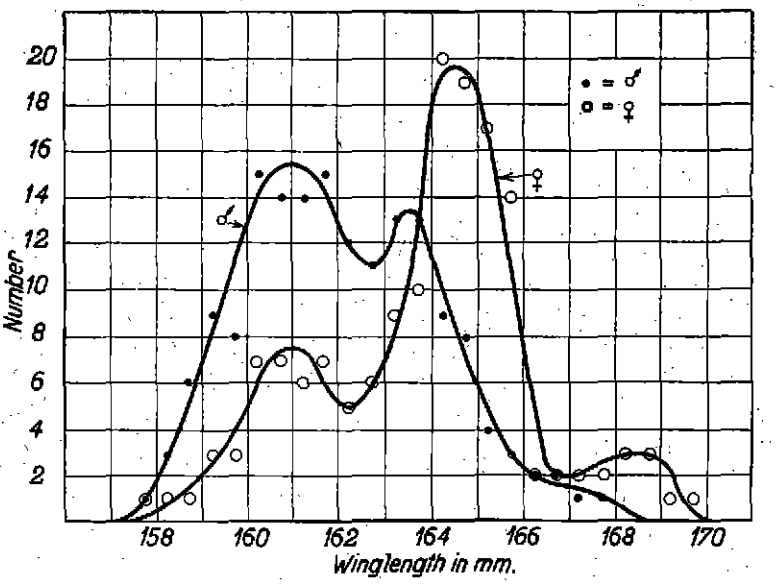
The authors showed a diagram obtained by plotting the figures of their table V, but it has the disadvantage of being of a very complicated structure as a consequence of the rather small number of measurements.

This inconvenience can be avoided by taking the Woodpeckers together in larger groups, so that the influence of accidental fluctuations is diminished. I divided them with good result in groups with a difference in average wing length of 2 mm. To get a still smoother curve I shifted these groups ½ mm at a time, so that they overlap 1½ mm.

For example: 160,75—162,75 mm; 161,25—163,25 mm; 161,75—163,75 mm; and so on.

In this way the following graph has been constructed. Each point in it represents the number of wing lengths fitting within an interval of 1 mm above and below the corresponding size.

Now it is striking that both curves are composed of three normal probability curves that can be calculated or simply estimated by sketching. By applying the latter method it was possible to get an impression of the average wing length, the dispersion of these lengths and even of the percentage of the three component types.



The results are given in the table.

subspecies	winglengths in mm				%
	average ♂	dispersion ♂	average ♀	dispersion ♀	♂♂ + ♀♀
a	161	158—164	161	158—164	44
b	163,5	161—166	164,5	162—167	50
c	167	166—168	168,5	167,5—169.5	6

Only after having applied the same method to the data of regions with Green Woodpecker populations of rather unmixed character, such as those of Sweden and England, it will be possible to give an exact distinction between the subspecies.

According to the data collected from literature by Hens and van Heurn it seems probable that type a corresponds with the British race *Picus viridis pluvius* Hartert and type c with the Swedish race *Picus viridis viridis* L., while for type b the intermediate form *Picus viridis virescens* Brehm remains. The gradual shift of the dimensions across Europe will then probably be the result of a change in ratio of the types a, b, c and perhaps other types.

With this remark I don't intend to indicate that these types actually have to be considered as true subspecies. I leave this question to experts on this subject. It is only my intention to show that clear results can be obtained with the aid of a simple graphical method which can be varied in each special case with the number of measurements.

It seems to me that an analogous treatment of numerous data in literature will enrich our knowledge to a great extent.

1 Nov. 1946.

Eindhoven, Floralaan-Oost 74.