

# New Thoughts on Fingerprints— Practical Applications

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Until about 10 years ago, I had little knowledge of scientific writings on fingerprints. I had one bible—Henry's "*Classification and Uses of Fingerprints*," and, indeed, this is to-day the basis of my working life.

However, on the 6th September, 1952, a turning point came into my life—Bertram Mills' Circus came to Wakefield, and, because exhibits of monkeys were scarce in our Department, I decided to 'print the chimps'.

To say that I found the task interesting is an understatement, so eventually I went to Belle Vue, Manchester, where I was able to add further to my collection.

A comparison of Plates 1 and 2 taken respectively from a Macaque and a Gibbon, two of the animals I 'printed'. shows considerable differences. The Macaque has circular patterns at the base of the fingers and on the hypothenar area, whilst the Gibbon is virtually patternless.

T. G. Mairs, the American expert, suggested that the whorl was the original pattern and that through the ages this had progressed to the loop and eventually to the arch or patternless area.

If we now compare the Gibbon with Plate 3, taken from a chimpanzee, and a human, it may appear that the Gibbon broke away from the evolutionary tree at a much earlier stage than man himself.

However, very little work has been done, in this country at least, in the field of comparative dermatoglyphics.

## **Dermatoglyphics and Twinning**

My next venture was into the realms of twinning and in conjunction with our County Dental Officer I collected upwards of 200 sets, some of identical twins and some not. My own interpretations of these were not always in keeping with the official descriptions of the pairs, given at the birth by doctors and midwives.

It was at this stage that I made some outstanding discoveries. One was the word "Dermatoglyphics" and from what appeared to me to be somewhat obscure Journals, "*Anatomical Record*", "*Journal of Genetics*" and "*Biological Bulletin*", I realised that my discoveries had been somewhat belatedly made. Before going into any details, perhaps it would be better to start all over again and look at the enlarged section of a piece of skin shown in Plate 4.

## **Ridge Characteristics**

You will notice the places where the lines end and divide, termed "ridge characteristics", and in comparing two sections of skin, whether it be from finger or palm or sole, if a number of these characteristics agree in 'coincident sequence' say 8 or 10, the number that can be seen in this plate, a fingerprint expert would have no hesitation in saying that these were made by the same person. If this evidence was to be given in Court, of course the number would have to be 16 (*Great Britain, Ed.*).

In one recorded case an officer was giving evidence on a bare foot impression found at the scene of crime. The defence counsel was at great pains to point out to the Court that whilst this officer was an undoubted expert on fingerprints, this was, in fact, his first case on footprints, so, how could he possibly be regarded as a 'footprints expert'?

It is also reported that the judge commented that "Whilst it may be true that everybody's fingerprints were different and that there had been a recent case in which it had been stated that everyone's palmprints were different,





Plate 1 Right Palm and Foot Prints of Macaque

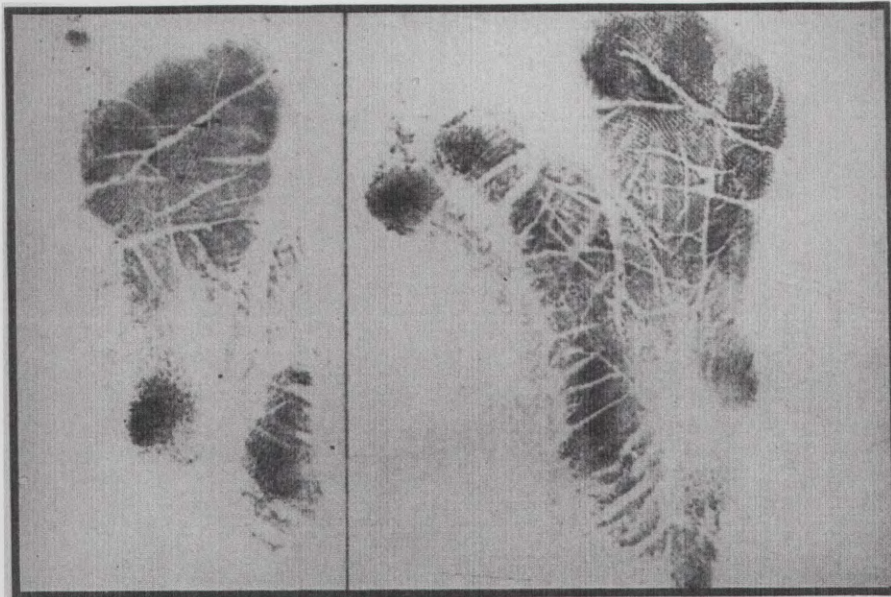


Plate 2 Palm and Foot Print of Gibbon