

TARPAN OR KONIK ?

An analysis of “semantic denaturation”

The horse which is in the process of becoming de-domesticated and recovering little by little its place in some European ecosystems, especially in the Netherlands, often comes under the name of the Konik (or Konik Polski). This name, imported from Poland, is used inasmuch as the name Tarpan is considered to be applicable to the wild horse which reputedly ceased to exist in 1879. This deliberately limiting choice fails to take into account a certain number of scientific and historical facts.

Moreover, it maintains an erroneous perception of the horse with the public which in general finds it hard to imagine that a horse can leave the domestic arena.

The descendant of the wild horse which became the little Polish horse

After the discovery of descendants of the tarpan with farmers of the Bilgoraj region at the beginning of the 20th century, Professor Tadeusz Vetulani undertook to save this primitive strain. His aim was to get back to the wild tarpan and introduce it, like the European bison, into its last-known refuge: the Bialowieza Forest.

When Vetulani died in 1952, the dominant influence of some horse specialists ended up by consigning this horse to the traditional horse world, by giving it the official name of Konik Polski, literally "little Polish horse". Hence a genuine universal zoological heritage was relegated to the rank of a mere national breed of horse.

Incidentally, it should be mentioned that if this horse is not specifically Polish (as is the case of the European bison), it is not "little" either. Its stature is eumetric (in fact natural) and comparable to that of other wild equids.

These horses were subsequently imported into the Netherlands because of their "primitive" character, in order to reconstitute a population of large herbivorous animals in some large reserves such as Oostvaardersplassen. Spurning convention, the Polish name was retained. But as the term Konik is not specially clear for the general public, they had to add the word "horse". Thus, for the sake of international communication in English, the Tarpan became the Konik Horse, the "little horse horse"!

Hence today, it is appropriate to recall in detail what the term Tarpan means and why it is perfectly applicable to this horse.

The Tarpan, a cross-bred wild horse

The name Tarpan was, to begin with, used by Pallas in 1780 to describe the wild horses discovered on the steppes of Eastern Europe in the 18th century (1). Later, and by default, one may say, it was used, somewhat inappropriately, to describe the European wild horse *Equus ferus ferus* of the post-glaciation period, the traces of which remain in a very few sedimentary deposits of the Lower and Middle Holocene (2).

According to Vera Eisenmann, a French paleontologist and horse specialist, the term Tarpan corresponds, in any case, to just one horse discovered in southern Russia by Samuel Gmelin in 1769, the unique skeleton of which, now in the Moscow museum, is the holotype.

Even without adopting such a restrictive point of view, considering the tarpan to be « the » European primitive wild horse which emerged at the beginning of the Holocene, is doubtful, to say the least.

All the more so, as, contrary to the Aurochs as regards cattle, the European wild horse is not a clearly identified species for the paleontologists. Its systematic status has remained highly unclear and controversial to this day, due especially to the scarcity of the osteo-archeological material available up to the Neolithic period (3), which saw the arrival of the first domestic horses from the 3rd millennium BC. It is beyond dispute that the wild horse of the Holocene period had a certain polymorphism in a vast and ecologically varied bio-geographical region. This variability of the wild ancestor (species or sub-species) undeniably paved the way for the variety of domestic breeds that exist (4). Moreover, the place of Przewalski's horse needs to be determined in this context.

Furthermore, it must be remembered that wild and domestic horses were mutually fertile since they belonged in fact to the same species. Indeed, the domestication of the horse, which began on the borders of eastern Europe and central Asia, took place only 5-6,000 years ago. This relatively recent domestication, compared with that of other species, finally left little time for genetic divergence which may have led to the emergence of a new species.

Hence, the genetic identity of the tarpan discovered in central and eastern Europe in the 18th century remains highly uncertain. These horses had probably received a certain number of domestic genes over a long period of time. This hypothesis is moreover taken up by the scientists present at the time of the discovery. They even allude to a process of becoming feral (5). Indeed, since the large-scale emergence of domestic horses in Europe, probably at the end of the Neolithic period, it is clear that the surviving wild horses had contacts with their domestic counterparts which were as yet unfamiliar with fences and stables. It is even obvious that they themselves sought contact, which notably led to the « theft » of domestic mares by wild stallions. This behaviour was moreover one of the main causes of their progressive elimination by farmers.

This partial cross-breeding (6) is probably the reason for the gradual disappearance of some primitive characteristics, such as the erect mane (7).

One can therefore consider that the tarpan genotype was different from the « real » European wild horse (*Equus ferus ferus*) which emerged in the Upper Pleistocene. Hence the Tarpan could be defined as:

European wild horse of the historic and protohistoric periods, more or less cross-bred with domestic horses.

The Tarpans of Bilgoraj

As for the forest strain of the tarpan rediscovered in Poland in the 1920s, it must be noted that it descended from the last wild horse captured in the Bialowieza Forest in 1780 and introduced into Count Zamojski's game park near Bilgoraj in the south-east of the country. After the park's closure in 1806, these horses were given to poor farmers of the region. Their rudimentary breeding conditions enabled these horses to retain the major part of their genetic heritage.

Having said that, the henceforth domesticated tarpan suffered further cross-breeding with other « Koniks ». The latter were mainly small primitive horses which for the most part were descended from other tarpans, perhaps coming from steppe strain, which had been domesticated previously (8).

Clearly then, the Tarpan genes were not generally eliminated by this period of domestication. It is the fact that they had retained the phenotypical characteristics of the tarpan that these « little horses of Bilgoraj » were discovered and described by Polish scientists one century later.

While on the subject, it might be useful to add that the introgression of foreign genes, in this case of domestic stock, in a species (or subspecies) does not mean that it inevitably disappears. This phenomenon, either natural or caused by man, is well-known in a large number of wild mammals (9).

As for the change of status from wild to domestic, it by no means implies a change of name. Otherwise, camels, reindeer, yaks and domesticated elephants will have to be renamed. For the Tarpan, it must be noted that the hypothesis of a succession of episodes of domestication and return to the wild (« feralisation ») is far from inconceivable.

Hence, to the extent that, contrary to the Aurochs, the genetic line has never really been broken between the last wild Tarpan and their domesticated descendants of today, the use of the term Tarpan appears fully justified.

Finally, the idea of « reconstitution » mentioned too often concerning the Bilgoraj strain, is no longer acceptable. It comes from a misunderstanding of the experiments conducted by the Heck brothers, who reconstituted the Aurochs (or rather, its phenotype) by crossing different breeds of primitive cattle. The case of the Aurochs *Bos primigenius* is very different, since the latter is a different species from the domestic cow *Bos taurus*. The former became extinct in 1627. Unfortunately the Heck brothers wanted to do a similar experiment, unjustifiably, with the Tarpan. This has contributed to maintain the highly confused thinking which continues to this day (10).

A name to be specified ?

The relict strain which was saved by the Poles, and especially Tadeusz Vetulani, in the Bilgoraj region cannot be totally representative of the Tarpan, which was still present in a few areas of Europe in historic times.

This population was fed through a bottleneck which evidently restricted its genetic pool. It can nonetheless be considered to be saved, thanks to the policy being carried out in the Netherlands.

To make it more clearly identifiable, it could perhaps be given a particular name. Some have already been used here and there :

- the « forest tarpan », in reference to the form noted by Vetulani. But this name would really only concern the Bialowieza strain which is difficult to identify today.
- « Vetulani's tarpan » pays deserved tribute to the person who contributed most to the saving of this primitive horse. But this name is not without risk, for it could refer to the famous reconstitution of « Heck's Tarpan »
- the « Bilgoraj tarpan » speaks of the origin of this relict strain. On the other hand, it could indicate a « local breed ». This geographical reference is nonetheless taken up in some scientific articles, which could lead to a general acceptance of this name.

While we wait for a final answer, the simple name Tarpan remains suitable for current use. Moreover, it enables the Sorraia to be taken into account. This is a genuine Iberian strain of the Tarpan, rediscovered in the south of Portugal at roughly the same time as the discovery of the Polish strain (11).

Finally, the scientific name of the Tarpan needs to be determined. The latter was officially described by Boddaert in 1784 under the name *Equus caballus ferus*, and renamed *Equus (caballus) gmelini* by Antonius in 1912. In 1928, Vetulani described its forest variety as *Equus caballus gmelini* forma *sylvatica* from some Bilgoraj horses, based on osteological analyses.

Moreover, recent classification methods propose bringing all horses together, including Przewalski's in one and the same species *Equus ferus*, while setting apart *Equus ferus przewalski* as the Asiatic wild horse, *Equus ferus ferus* for the « real » European wild horse which no longer exists and *Equus ferus caballus* for the domestic horse.

In this context, the Tarpan should logically be named *Equus ferus gmelini*.

Nonetheless, given the virtually constant evolution in our approach to the phylogenesis of the horse, stemming notably from genetic research based on DNA (including that of fossils), caution needs to be exercised regarding the final taxonomy of the Tarpan.

In any case, the future of this horse is more important than what name we give it. However, the name we give it will have an influence on the acceptance of the idea of a return to the natural state or dedomestication which it must have.

Therefore, choosing the name is not so insignificant !

- (1) It is believed to be a Turkmen, or more probably, Tatar term meaning precisely « wild horse ».
- (2) The « European » wild horse's range must have extended well into Asia. Today, some primitive horses of characteristic phenotype can be found, notably in Yakoutia and in a remote valley in Tibet (Riwoch's horse).
- (3) This scarcity is caused by a strong decline in horses following the glaciation, probably due as much to the strong influence of *Homo sapiens* on the larger herbivores (hunting) as the effect of climate change (the disappearance of steppe and the spread of forest cover).
- (4) Several recent studies based on DNA, including fossils, give support to this theory.
- (5) Return to the wild state after domestication.
- (6) Cross-breeding refers to crosses within a species, between subspecies or different breeds, as opposed to hybridisation, which refers to crosses between different species.
- (7) « Chatiloff's tarpan », a foal captured in 1866 and kept at Moscow zoo until 1887, had a falling mane.
- (8) Note that Tadeusz Vetulani who had identified a forest tarpan osteologically different from the steppe tarpan, considered horses of Bilgoraj to be in fact an intermediate form.
- (9) We can quote a certain number of species especially concerned by this: wild boar, Mediterranean mouflon, Red deer, and wild cat, ...
- (10) This operation, which can be strongly criticized scientifically, was performed in Germany between the two world wars by crossing several primitive equine breeds with the real tarpan (the Bilgoraj strain) and Przewalski's horse ! Thus Heck's Tarpan is still present in some European animal parks. The Heck brothers are moreover criticized for their links with the Nazi régime.
- (11) The Sorraia has not, unfortunately, benefited from the same interest as its Polish cousin and its status is far more precarious.

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