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EVALUATION OF THE FIAKIER COATCHES HORSES WORK AT THE PODHALE DISTRICT

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Проведено дослідження з оцінки коней, які використовують в кінний туризм в районі Podhale - найскладнішій ділянці польських Татр за маршрутом «Морське Око» на дистанції 7,5 км і висоті 450 м над рівнем моря. Оцінювали стан здоров'я коней, стан копит і регулярність їх кування, частоту серцевих скорочень, аускультацію, число вдихів, ступінь зневоднення, аналізували кров.

Ветеринарні дослідження підтвердили, що робота, яку виконували коні, не представляє загрози для життя або здоров'я коней. Вид виконуваних робіт, їх регулярність, стан копит і якість кування не впливають на роботоздатність коней.

Ключові слова: **коні, кінний туризм, роботоздатність, стан здоров'я, аналіз крові.**

From many years, a problem, propelled by medias and organizations of the animals' protection became the problem with a work of horses pulling the tourists [1] in cities (the cabby) and in mountain regions. The sharp criticism subjected usually was put to conditions of the horses' stop and size ("weight") their work. In present times, when the majority of occupants of regions high urbanized and industrialized has not used horses any more as this happened formerly. It is difficult redacted, "public opinion" (read: created opinion mainly by sensationally media's) to discuss on subject of difficulty of conditions and work The Fiakier horses at all.

The test of qualification was the aim of undertaken investigations or the executed work by carrying in mountain terrains the tourists horses is for health of these animals harmful as well as the shape and state of health those working horses.

Materials and methods. In spring 2012 year was conducted was investigations estimating horses' work in region of Podhale, on the most difficult polish section of mountain horse work, carrying tourists to Morskie Oko on rout Palenica Białczańska - Włosienica, on distance about 7,5 km near difference eminences carrying out 420 m.

The opinion was hugged for all carriages notified in May 2012 at Management of the Tatra Mountains National Park and all notified in this deadline to remembered horses.

The horse shape was qualified as working animals: state of their health, state of hooves and regularity of their shoeing. The estimation was done for: horses' movement, quality and correctness of using harness and kind of bridles, attention was turned on aesthetics of whole yoke as well as on some different stepping out irregularities. The level of the horses' fatigue was qualified by studying the pulse (the frequency of heart action - by a heart work monitor, or by auscultation), the number of breaths, degree of dehydration (by the skin test and by the mucosa) and the peristalsis of intestines (by auscultation). The blood was send to laboratory checking investigations. The blood was taken from cervical external vein. In the laboratory was made several probes such as: hematocrit, OB, morphology, kinas creativity, proteins, liver enzymes and bilirubin [2].

Results and their discussion. It direct investigations that have been carried out in two periods - in days 21 and 22 May (suitably 42 and 62 horses) and in 22, 23 and 24 June (105, 67 and 5 animals), estimating 281 brought horses, from what 37,0 % in May (Table 1). Most of the horses were geldings, there were no stallions, and only the 5 mares, as estimated were only a small percentage of the studied group (1,78 %). The small group were horses, which couldn't be checked these days from different causes (the current state of health, lack of suitable preparation / the training /, the state of horseshoes, fresh purchase, etc.), so for them, the veterinary investigation was transferred to august deadline.

Moreover in track of observation of led veterinary investigations, some renewed attentions had been done in relation to 47 horses, which were studied already previously – for example the horses which passed already the investigation in earlier deadline, and they transported the tourists again. Also the horse's work on a route was checked, both parts- during drive wayup to Włosienica, and during downhill ride to Palenica, observing 34 working carriages.

Table 1

The number of checked horses

Deadline of investigation	totaly		mares		geldings	
	n	%	n	%	n	%
21.05.	42	40,38	2	1,92	102	98,02
22.05.	62	59,62				
22.06.	105	59,32	3	1,69	174	98,31
23.06.	67	37,85				
24.06.	5	2,83				
together	281	100,00	5	1,78	276	98,22

In predominant majority animals made up horse's population called "in strength of age"; only bit more than 10 of them were 10 years old and more. Young horses were also very insignificant group- the 3 - 4 years old horses, which just began their job in driving and they were just trained to it. Under racial regard horses belonged to many different races and types, mainly hot-blooded horses (in this in predominant majority Silesian horses and noble half-bred, although the animals of malopolska, wielkopolska blood, as well as anglo-arabian pureblood, traken blood and even English full blood to) and quite a big number of cold-blooded horses considerable group or cold-blooded horse's type, with unestablished deep origin. This variety had not influence on their usable value in driving. Also under in relation to ointment, the horses used by fiakiers represented wide lots of possibilities. The most popular was bay ointment, also black - bay and chestnut, but there were also grey horses, black, dun, piebald (in this grey-piebald!), appaloosa (leopard) and roan.

It became established [3, 4], that the horse's work on rout Palenica Białczańska – Włosienica doesn't belong to heavy and the admissible load, that these horses would transport is considerably larger than they admit to receive in the norms (the number of people) settled through the Tatra Mountains National Park.

Huge controversy in public opinion, as also the activists of numerous Companies of Care over Animals, except, they say, "horses' murderous work" carrying tourists to Włosienica, is the shape of their health. It was establish by the investigations, that none of studied animals, estimated after walking on a hill to Włosienica, was not in such shape, that could be called "bad" – not good enough to continue the job, saying not al-

ready about hunger or any other it's form (Table 2). Over 82% studied animals presented good shape, and more far near 16% -quite good one. Only 2% of horses were noticed as ones with small shape problem, which however did not eliminate them from work. It was only a signal to the owners, to make carrying those horses more carefully. The majority of worse shape animals were the horses of cold-blooded races or thickened, and also the young horses, beginning one's work on a route Palenica Białczańska - Włosienica. It is understandable, because the thickened horses and cold-blooded ones have less firm constitution, and more easily show the fatigue than the animals of hot-blooded races, dismissing sweat (the influence here has also the system of feeding and watering horses), however for young horses the new unknown work, with large burden is more stressing out than for older animals, "knowing already their profession".

Table 2

Shape of estimated horses

Deadline of investigation	good		proper		not satysfying	
	n	%	n	%	n	%
may	82	78,85	19	18,27	3	2,88
june	150	84,75	25	14,12	2	1,13
together	232	82,56	44	15,66	5	1,78

There was a group of timond and nervouse horses among the brought horses (Table 3). But they made up unimportant percentage - shaping below 5% - 21.05. two pairs, 22.05. - 3 horses, 22.06. - 3 horses and 23.06. - 1 horse.You can wish to have such animals less and less amount, however their nervosity wasn't dangerous for tourists or the other people – it only needed more vigilance from the driver.

Table 3

The animals' nervous excitability

Deadline of investigation	calm-small		anxious		to excitable		hyperexcitable	
	n	%	n	%	n	%	n	%
may	82	78,85	6	5,77	9	8,65	7	6,73
june	160	90,40	8	4,52	5	2,82	4	2,26
together	242	86,12	14	4,98	14	4,98	11	3,32

The state of horses hooves and quality and correctness of horseshoes is straightly connected with their movement. Among estimated horses was found (Table 4) many irregularities related with form and health of hooves, regularity of their shape, correctness of their nurturing and correctness of their shoeing. However settled irregularities had no influence nor for quality of the horse's movement, or for possibility of causing pain, what could be seen as a problems with a proper movement and also would be checked in place of empirical tests also.

Table 4

The state and quality of hooves of horses under the observation

Deadline of investigation	good, strong		proper		bad, week	
	n	%	n	%	n	%
may	18	17,31	79	75,96	7	6,73
june	31	17,51	122	68,93	24	13,56
together	49	17,44	201	71,53	31	11,03

It was noted down, that good, strong hooves, correctly the formed horn of hooves possessed only just 49 horses, (17,44 %), and more far 201 (71,53 %) it had it correct, although with small faults. 31 horses (11,03 %) had the hooves about worse quality of hooves horn, and many of them needed just temporary intervention of specialist - the smith.

The quality of hooves is connected also with their shoeing, that was in many cases done (also with cleaning hooves) by owners of the horses, which was not profitable for regularity of executing that process. It was established (Table 5), that 88 horses, then 31.32 is % had irregularities in shoeing hooves, however it did not impinge on their use. In a number of 193 the state of shoeing was recognized as very good (22) or proper (171).

Table 5

The estimation of shoeing horses in observed group

Deadline of investigation	proper		good enough		not satysfying	
	n	%	n	%	n	%
may	8	7,69	59	56,73	37	35,58
june	14	7,91	112	63,28	51	28,81
together	22	7,83	171	60,85	88	31,32

Also the regularity of movement of horses working in carriages was questioned. As a result of conducted observations (Table 6) was found, that the temporary irregularities of walking had less than 4% , the "signing", which was finished after they stopped for some period of time, and got rest. Only one horse got injury by bringing him to investigations, that excluded him out of the process, and he was transported back to the stable. No animals had any persistent lameness nor affirmed weaknesses that could lead to more serious legs illnesses.

The numerous small hurting was observed, being in different stage be healing small wounds, which did not way influenced to the shape of horses work. They could come by being in a transportation track, during work, and even by standing time, or during staying in the stable. This was only related to aesthetical impressions, like looking worse as a whole carriage.

Table 6

Estimation of horses movement in observed group

Deadline of investigation	No restrictions		Temporary restrictions*		Budzący zastrzeżenia	
	n	%	n	%	n	%
may	99	95,19	5	4,81	0	0,00
june	171	96,61	6	3,39	0	0,00
together	270	96,08	11	3,92	0	0,00

** „signing" – gone after a while of rest*

The very important information about the stage of horses were given by pulls checking by monitors of heart work measurements (Fig. 1).

An important indicator of fatigue is the animal's state after effort, called - speed of restitution, that is returning the hi, effort pulse to lower values, less than 62hits minute. The record of the heart beating of a horse pulling the carriage to Polana Włosienica (Fig. 1, 2) has shown, that pulse before effort had carried out about 48 hitting on minute, effort it hesitated oneself from 110-150 hits/ min, and the time of restitution of pulse did not cross 10 minutes. This means, that studied horse was well prepared to pull

the carriage. Print 2 represents the continuous registration of frequency of heart beating in connection to effort, temperature around, rate of work and degree of the inclination of terrain.

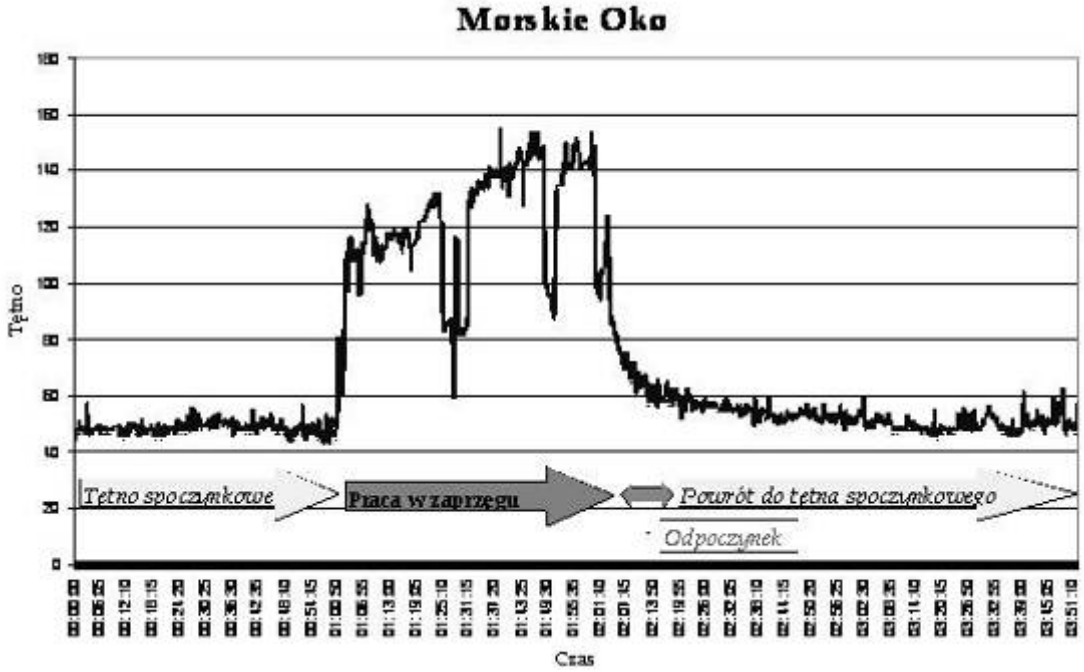
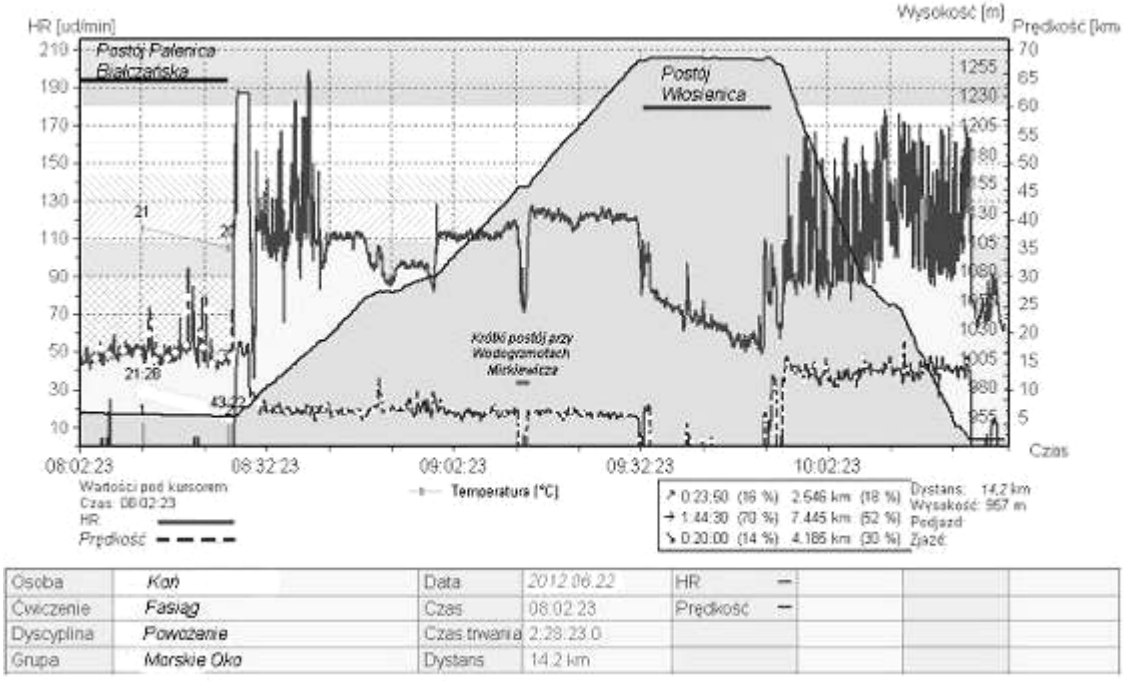


Fig. 1. Chart of the heart of randomly selected horse pulling the carriage together with another horse to Włosienica below Morskie Oko.



Osoba	Kari	Data	2012.06.22	HR			
Ćwiczenie	Fasiąg	Czas	08:02:23	Prędkość			
Dyscyplina	Powożenie	Czas trwania	2:28:23.0				
Grupa	Morskie Oko	Dystans	14.2 km				

Ryc. 2. Chart of the heart's beating of the pulling the carriage horse, on a route to Morskie Oko, together with another horse, up the hill and down. The hill from Palenica to Polana Włosiennica is signed on a chart.

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ОЦЕНКА СОСТОЯНИЯ ЛОШАДЕЙ, ИСПОЛЬЗУЮЩИХСЯ В КОННОМ ТУРИЗМЕ В РАЙОНЕ PODHALE (ПОЛЬША)

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Проведены исследования по оценке лошадей, которые используются в конном туризме в районе Podhale - самом сложном участке польских Татр по маршруту «Морское Око» на дистанции 7,5 км и высоте 450 м над уровнем моря. Оценивали состояние здоровья лошадей, состояние копыт и регулярность их ковки, частоту сердечных сокращений, аускультацию, число вдохов, степень обезвоживания, анализировали кровь.

Ветеринарные исследования подтвердили, что работа, выполняемая этими лошадьми, не представляет угрозы для жизни или здоровья лошадей. Вид выполняемых работ, их регулярность, состояние копыт и качество ковки не влияют на работоспособность лошадей.

Ключевые слова: лошади, конный туризм, работоспособность, состояние здоровья, анализ крови.

ASSESSMENT OF THE STATUS OF HORSES USED IN EQUESTRIAN TOURISM IN THE REGION OF PODHALE (POLAND)

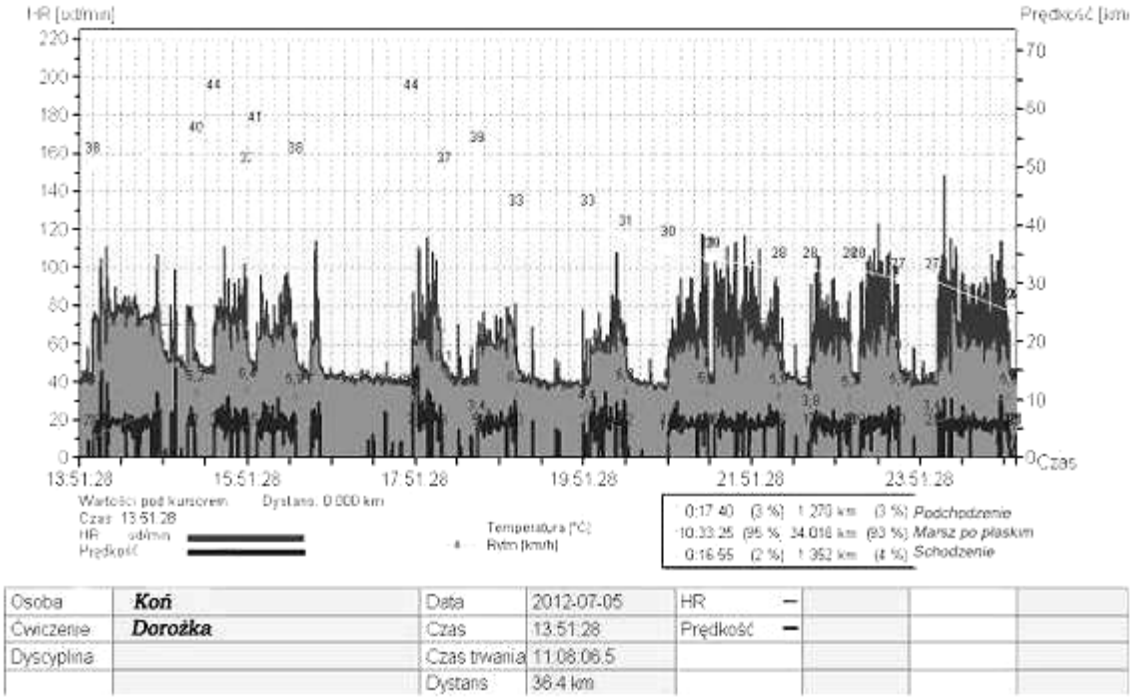
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Studies were conducted on the assessment of horses, which are used in equestrian tourism in the region of Podhale, the complex division of the Polish Tatra on route «Sea Eye» on the distance of 7,5 km and height of 450 m above sea level. To evaluate the state of health of the horses, the condition of hoofs and the regularity of its forging, heart rate, аускультацию, the number of breaths, the degree of dehydration, analyzed the blood.

Veterinary studies have confirmed that the work carried out by these horses do not pose a threat to the life or health of horses. Type of work performed, their regularity, the condition of hoofs and the quality of forging does not affect the operation of the horses.

Keywords: horse riding tourism, performance, state of health, the analysis of blood.



Osoba	**Koń**	Data	2012-07-05	HR			
Ćwiczenie	**Dorożka**	Czas	13:51:28	Prędkość			
Dyscyplina		Czas trwania	11:08:06.5				
		Dystans	36.4 km				

Fig. 3. The recording of frequency of heart beating of a random chosen horse, working together with another one, in a hot day in Cracow. There are colored lines, signed on graph: the yellow- temperature of air; red- frequency of the heart beat; the dark the blue- the speed in km /per hour; light blue-rythm of horses moving.

The registration of the heart work shows, that in initial phase of drive, on comparatively small inclination the terrain, when the horses pull the carriage in trot, the pulse grows up to 170-190hits/ min., and then, though quite big hill, as they walk, the pulls goes down and stays on a level of 110 -120 hits / min. What is interesting, the longest time the highest pulse keeps on by the time of driving down the hill from Włosienica. Then when they move down, with incurred brake, in trot, very often they have to slow the vehicle with their mass of body.

For comparison, below, the recording of 11-hours long work of a carriage hors in Cracow was put (Fig. 3). As we see from introduced graphs results, the work that the horses do under Morskie Oko needs from them larger single effort, than same time horses from Cracow, but definitely one cannot say, that it is the work over their strength.

Correct pulse of an adult, proper rested and relaxed horse is 28 to 40 hits/ one minute, but with young animals can come to 52 hit/minute [5]. The more trained organism, these values are closer to a bottom borders. In physical effort, connected to put on work, frequency of hitting heart can achieve even 200-220 hitting / min. On the average, in track of intensive practice, value of this oscillates between 140-170 hitting / min.

Conclusions:

1. Veterinary investigations confirmed that work, that these horses do, is not a threat to life or to health of the horses.

2. The shape, regularity of movement, state of hooves and quality of shoeing are good looking and do not influence to their ability for work.