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## BREACHING OF WATER OBSTACLES IN THE MILITARY ACTIVITIES OF LATE MEDIEVAL MONGOLS

Breaching of natural obstacles posed no problem for early nomads of the Great Steppe. Throughout many centuries of mobile way of life they learnt to surmount all kinds of natural barriers which they encountered during their migrations. Such skills were practised during everyday peaceful existence and they became of crucial importance during military campaigns. Efficient breaching of natural obstacles enabled steppe warriors to considerably increase the rapidity of activities, to take their enemies by surprise and to extent the scope of aggression. This ability was undoubtedly one of numerous advantages which contributed to astonishing military successes of late medieval Mongols.

The Mongols were also equally skilled in breaching water obstacles. The only case of their failure with regard to that were unsuccessful attempts at invading the Japanese Islands in 1274 and 1281. It would be difficult, however, to attribute it to the Mongols' inefficiency. Apart from the fact that both the ships which transported Mongol warriors and their crews were Chinese, the failure of the invasions was caused by forces of nature. Invasion fleets were destroyed by typhoons ("kamikaze" – "divine wind").

We do not know much about Mongol sailing in large natural bodies of water, such as seas or lakes. There are more data concerning rivers. A stereotyped opinion of aridity of the homeland of these people is not entirely true. The territory of Mongolia, especially its north-eastern part – the homeland of Genghis Khan's kindred – is cut by a considerable number of rivers. Many of them have features of mountain rivers. Their stream is rapid and their banks are difficult to access. The Mongols therefore learnt how to cross rivers already before their great expansion. They did not consider such activities as particularly difficult. The most important source for the medieval history of these people – *The Secret History of the Mongols* – frequently mentions crossing rivers as a usual activity. It is only at one occasion that this chronicle says that "the majority [of Naimans and Merkites] drowned while crossing the River Irtysh" during the flight after the lost battle with Genghis Khan in 1205<sup>1</sup>. It can be taken for granted that

there were cases of men trying to cross a river and being defeated by the force of water, in spite of their experience and skill.

The Mongols crossed rivers in numerous ways: with no use of any supporting means, with the use of floating carriers and by building bridges. The choice of a proper way was influenced by numerous factors. It is obvious that a small reconnaissance party and a large army with numerous trains crossed rivers in a different manner.

The first of the afore-mentioned ways, being the simplest one, was to cross a river on foot or on horseback in a particularly convenient place, i.e., shallow and with accessible riverbanks. This required a considerable knowledge of the terrain. We know, however, that early Mongols were famous of particularly efficient intelligence and reconnaissance services. They were able to make perfect use of necessary information obtained from captured enemies. Their expeditions were carefully prepared with regard to that. While marching, the main forces were preceded by a vanguard called the "forehead" (Mongol: *man-glai*). The most skilled of particularly battle-experienced warriors of the vanguard (Mongol: *bolgaul*) were chosen as scouts. They were sent far ahead in order to investigate the terrain, the forces and places of deployment of enemy troops. So-called *gazarchi* (guides) also counted among the scouts. They were supposed to guide the troops as efficiently as possible, to inform about routes, natural obstacles and convenient places to cross rivers. Guides were often recruited among the inhabitants of invaded territories who were eager to cooperate<sup>2</sup>.

It must be stressed that the Mongols eagerly used already existing routes in the enemies' territories wherever it was possible. These routes usually led to long known and commonly used fords. A perfect example of such an action is the Mongol invasion of the Polish lands in 1241. The main course of their march is relatively well-known. They went along routes of very old origin, which crossed large rivers

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*Provided with an Exegetical Commentary*, ed. F. W. Cleaves, London 1982, §198.

<sup>2</sup> W. Świętosłowski, *The Organization of the Mongols' War Expeditions in the Twelfth and Thirteenth Centuries*, "Fasciculi Archaeologiae Historicae", fasc. XV, 2002 (2003), p. 33-38.

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<sup>1</sup> *The Secret History of the Mongols. For the First Time Done into English out of the Original Tongue and*

in particularly convenient places. For example, the Mongol army crossed the River Wisła (the largest river in their way) in a place which was long known of an exceptionally convenient ford, i.e., near Zawichost. Some Polish historians maintain that the Mongols learnt of this convenient passage already in the territories of Rus'. It was remembered there that Roman Duke of Halych had been defeated by the Polish troops in 1205 as he attempted at approaching the ford near Zawichost. It will also be recalled that the ford near Zawichost was earlier (in the 12<sup>th</sup> c.) used by other Great Steppe's nomads trying to penetrate the Polish lands, i.e., the Cumans. It was perhaps them who informed the Mongols about this convenient passage.

Mongols selected places of passages in a particularly careful way, sometimes even at the cost of the loss of time. For instance, *The Secret History of the Mongols* records a practical recommendation by Genghis Khan that rivers are to be crossed in their upper (narrower) streams, even if it requires a longer way to march<sup>3</sup>.

Some medieval authors who were directly acquainted with the world of the steppe nomads described particular "means of transport", which facilitated the Mongols to cross rivers. These were made of specially prepared animal skins. Two main ways of their use for this purpose were applied.

Sometimes animal skins were inflated and tied together in order to make floats. Several inflated skins were often bound together in order to make rafts. *The Secret History of the Mongols* informs about crossing rivers on bound rafts<sup>4</sup>. Such a way was commonly known to steppe nomads, not only of Mongol, but also of Turkish origin. It was already mentioned in the 11<sup>th</sup> c. by Mahmud al-Kashgari. According to him, "rafts" were made of several inflated and bound skins. Such rafts were provided with a roofing and they could be comfortably used by a few people.

Another way of using floats made of animal skins consisted in tightening the brim of a skin flap. It was thus possible to make a simple skin sack as a container for clothes and some utensils, to tie it tightly and use it as a float to cross the river. Skins were also prepared in a different manner. Loops were densely fixed on the edge of a properly tanned round leather. A cord was pulled through the loops. The cord was then tightened in order to make a sort of a round container with a wide bottom. Clothes and "other hard objects", e.g., saddles were put inside. Then, men got into such a "round leather boat". Oars were often used to steer such a boat. This means of crossing was described in detail by Giovanni di Piano Carpini, an Italian Franciscan and the emissary of Pope Innocent IV to the khan of the Mongols in 1245-1247.

He appreciated its practicality and underlined its frequent use. According to Carpini, such a "boat" was often tugged by a horse<sup>5</sup>. The boat was said to be tied to the animal's tail.

It is unknown whether medieval nomads also took timber boats for their expeditions. Sparse written sources confirm that various kinds of such boats were known to them. For instance, Mahmud al-Kashgari mentions Turkish terms for various boats, i.a., a large one with two sails and a small and agile one called "qayyuq". The term "kayak", so widespread in the present-day world, perhaps comes from this word. Al-Kashgari also mentions dugout canoes<sup>6</sup>. These were perhaps made ad hoc, when a need arose. Sometimes the local population were forced to prepare boats for crossing rivers in the territories seized by the Mongol troops.

In large armies of some medieval peoples of the Great Steppe, with particular reference to the Mongols, there were specialised troops which could be called engineer and sapper troops according to the present-day terminology. Thanks to them the Mongols were able to quickly and efficiently cross and clear away natural terrain obstacles, artificial defence lines which blocked the routes and to destroy fortified sites. A good example of these troops' efficiency can be found in the relation of Thomas of Split on the Mongol conquest of the Kingdom of Hungary in 1241. It took the Mongols only three days to clear away the abatis which blocked passages through the Carpathian passes. The construction of these abatis was personally supervised by King Béla IV. According to Thomas of Split, the Mongols employed men who were equipped with axes and marched before the army. They were felling forests, preparing routes and removing all the obstacles from the frontier passes. These specialists built a bridge on the River Sajó in the very heart of the Kingdom of Hungary in the Hungarian Plain during just one night. The bridge was used by the Mongol troops which completely annihilated the Hungarian army on the other bank of the river, near the village of Muhi<sup>7</sup>. We also know that when Hulagu set out to conquer the Caliphate of Baghdad, messengers were sent forward with an order to built bridges on all major rivers in the route of the troops.

The afore-mentioned examples of breaching of water obstacles by late medieval Mongols confirm both their resourcefulness and their ability to make use of various means. Some ideas were of indigenous origin and derived from steppe traditions, e.g., the use of skin floats. There were also means which were surely borrowed from non-Mongol peoples. The ability to construct bridges was

<sup>5</sup> *The story of the Mongols whom we call the Tartars by Friar Giovanni di Piano Carpini*, ed. Erik Hildinger, Boston 1996, p. 74.

<sup>6</sup> E. Tryjarski, *Kultura ludów tureckich w świetle przekazu Mahmuda z Kaszgaru (XI w.)*, Warszawa 1993, p. 176.

<sup>7</sup> Toma Arhidakon, *Kronika*, Split 1960.

<sup>3</sup> *The Secret History* ..., §253.

<sup>4</sup> *Ibidem*, §109.

surely adopted from sedentary peoples. Such bridges were in all probability built by foreign craftsmen for Mongol armies. We may suppose this based on the fact that non-Mongol masters of craft also completed other construction tasks for the needs of the military activities. Narrative sources inform us that, e.g., throwing engines

were built by Persian and Chinese craftsmen for the Mongols. The ability to make use of the qualifications and the effects of work of foreign craftsmen was one of the factors which contributed to military achievements of medieval Mongols. These achievements arouse admiration even in our days.

### Streszczenie

#### Pokonywanie przeszkód wodnych w militarnych działaniach późnośredniowiecznych Mongołów

Dla dawnych nomadów Wielkiego Stepu przekraczanie przeszkód terenowych nie stanowiło problemu. W ciągu wielu wieków praktykowania mobilnego trybu życia nauczyli się sprawnie pokonywać wszelkie naturalne bariery spotykane podczas wędrówek. Zdolności te, ćwiczone w trakcie codziennej, pokojowej egzystencji, stawały się wyjątkowo ważnymi walorami podczas działań wojennych. Bezproblemowe pokonywanie przeszkód terenowych pozwalało wojownikom stepowym znacznie zwiększać szybkość działań, wprowadzać element zaskoczenia przeciwnika, znacznie rozszerzać zasięg agresji. Umiejętność ta była niewątpliwie jednym z wielu walorów przyczyniających się do fenomenalnych sukcesów wojennych średniowiecznych Mongołów.

Późnośredniowieczni Mongołowie potrafili sprawnie pokonywać przeszkody wodne. Jedynym przypadkiem poniesionej przez nich w tym aspekcie klęski były nieudane próby inwazji na wyspy japońskie w latach 1274 i 1281. Trudno jednakże doszukiwać się tu niesprawności Mongołów. Pomijając nawet fakt, iż zarówno okręty, transportujące wojowników mongolskich, jak i ich załogi, były chińskie, to klęskę wypraw spowodowały siły przyrody. Floty inwazyjne zniszczyły tajfuny („kamikaze” – „boski wiatr”).

W najważniejszym źródle do studiów nad średniowiecznymi dziejami tego ludu Tajnej historii Mongołów o przekraczaniu rzek wspomina się jak o zwyczajnym działaniu. Rzeki forsowali Mongołowie różnymi sposobami: bez użycia jakichkolwiek środków wspomagających, stosując nośniki pływające oraz wznosząc mosty. W Tajnej historii Mongołów zapisano także praktyczne zalecenie Czyngis-chana aby przekraczać rzekę w jej górnym (węższym) nurcie, nawet jeśli nadkłada się drogi.

Kilku średniowiecznych autorów, bezpośrednio zaznajomionych ze światem stepowych nomadów, opisało specyficzne „środki transportu” ułatwiające Mongołom przepływanie rzek. Wykonane były one z odpowiednio przygotowanych skóry zwierzęcych. Stosowano dwa zasadnicze sposoby wykorzystania ich do tego celu. Niekiedy skóry zwierzęce nadmuchiowano i zawiązywano, tworząc w ten sposób pływaki. Często kilka nadmuchianych skór łączono ze sobą tworząc tratwy. O przeprowianiu się przez rzeki na związanych tratwach przeczytać można w Tajnej historii Mongołów. Działanie takie znane jednak

było dość powszechnie wśród stepowych nomadów, nie tylko mongolskich, ale i tureckich. Wspominał o tym Mahmud z Kaszgaru. Według niego na „tratwach”, wykonanych z kilku nadmuchianych i połączonych razem skór, robiono zadanie. Mogło na nich pływać nawet kilka osób. Drugi sposób stosowania środków pływających ze skór zwierzęcych polegał na ściąganiu skraju płata skóry. Można było wykonać prosty skórzany worek – pojemnik na ubrania i niektóre sprzęty, szczelnie go zawiązać i na nim forsować rzekę. Przygotowywano też skóry inaczej. Na brzegu odpowiednio wygarbowanej, okrągłej skóry mocowano gęsto pętle, przez które przeciągano sznur. Ściągano go, tworząc ze skóry rodzaj szerokodennego, okrągłego pojemnika. Do środka wkładano odzież, ale i siodła oraz „inne twarde rzeczy”. Wsiadali też do takiej „łodzi” ludzie. „Łódź” taką często ciągnął koń. Szczegółowo opisał taki środek przeprawowy Jan di Piano Carpini. Docenił jego praktyczność, podkreślił częste używanie.

Nie wiemy natomiast czy średniowieczni koczownicy zabierali na wyprawy także drewniane łodzie. O tym, że znali różne ich rodzaje poświadczają nieliczne źródła pisane.

W dużych armiach niektórych średniowiecznych ludów Wielkiego Stepu, szczególnie u Mongołów, były wyspecjalizowane oddziały, które według dzisiejszej terminologii można by nazwać je inżynieryjno-saperskimi. Mongołowie dzięki takim oddziałom sprawnie i szybko pokonywali i likwidowali naturalne przeszkody terenowe, sztuczne linie obronne blokujące szlaki, ufortyfikowane miejsca obronne. Przykład ich skuteczności było zbudowanie w ciągu zaledwie jednej nocy zbudowali most na rzece Sajó na terenach królestwa Węgier w 1241 r. Mostem tym przeszły wojska mongolskie, które na drugim brzegu rzeki pod wsią Muhi doszczętnie rozgromiły armię węgierską.

Wspomniane przykłady sposobów pokonywania przeszkód wodnych przez późnośredniowiecznych Mongołów potwierdzają nie tylko ich zaradność w tym aspekcie, ale i umiejętność wykorzystywania różnorodnych środków. Niektóre z pomysłów miało rodzimą proveniencję i wywodziło się z tradycji stepowych, np. wykorzystanie skórzanych środków pływających. Były też sposoby z pewnością przejęte od ludów niemongolskich. Zapewne umiejętność wykonywania mostów przejęta została od ludów osiadłych. Budowali je dla armii mongolskich najprawdopodobniej

obcy rzemieślnicy. Domyślać się tego możemy wiedząc, iż niemongolscy mistrzowie realizowali na potrzeby działań bojowych także i inne działania konstrukcyjne. Wiemy z zachowanych relacji pisanych, że np. maszyny miotające budowali dla Mongołów wykonawcy perscy i chińscy.

Umiejętność wykorzystania obcych zdolnych rzemieślników i ich wynalazków była jednym z walorów przyczyniających się do sukcesów wojennych średniowiecznych Mongołów wzbudzających podziw po dzień dzisiejszy.

