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**THE CREATION OF THE KOREAN NAVY DURING THE KORYO PERIOD**

Benjamin H. Hazard

Most westerners who have any familiarity with East Asian history are aware of the fact that the Koreans were generally victorious in the naval battles fought against the Japanese in the final decade of the sixteenth century. These encounters were the result of the Japanese invasions of Korea as a part of Toyotomi Hideyoshi’s grand plan to conquer Ming China.1 Recently the role of the great Korean admiral, Yi Sunsin, and his ‘turtle boats’ in those victories has received wider notice among occidental readers through such works as ‘Lord of the Turtle Boats’ by Captain George M. Hagerman, U. S. N. in the United States Naval Institute Proceedings and John V. Southworth’s *The Ancient Fleets*.2 Nonetheless, one is appalled to observe that others purporting to give a complete history of warfare at sea devote not a single line to Korean naval accomplishments.3

The fleet that Yi Sunsin led was not formed spontaneously in direct response to the Japanese invasions, but was, rather, the result of naval measures developed against another Japanese threat that began more than two centuries earlier. The organization, traditions and ship prototypes already existed and only required the genius of Yi Sunsin to transform them into Korea’s most reliable defense against the seasoned veterans of Hideyoshi. If the Japanese troops could not be stopped on land, they could be blocked at sea. The stimuli for the formation of the Korean navy and for experimentation in naval architecture and armament were the Japanese forays against Korea in the later half of the fourteenth century and the first two decades of the fifteenth century. Although some of the more interesting naval developments, especially in organization, took place during the first few reigns of the Yi dynasty, that is after 1392, [page 11] this brief study will confine itself to the creation of what might be called a navy as a measure to cope with the Wako 倭寇 (Korean: Waegu) depredations during the waning years of the Koryo period (918-1392). These Japanese piratical attacks and pillaging expeditions threatened the very existence of the Korean state and contributed to the conditions that brought about the overthrow of the Koryo royal house of Wang.

While Korea had had a rich maritime and naval tradition dating from the Silla period, Koryo had to rebuild her naval establishment almost from the keel up in the fourteenth century. It may be well to sketch some of the earlier background. The Koreans established themselves as master mariners in their ninth century trade with China.4 The ninth century also witnessed the political disintegration of Silla. Korean pirates took advantage of the administrative confusion at home to raid Japan sporadically in 811, 813, 893 and 894. The pirates suffered such heavy casualties at the hands of the Japanese in their last efforts of the century that they ceased raiding.5

The founder of Koryo, Wang Kon, posthumously known as Wang T’aejo (r. 918-943), began as a lieutenant of Kungye (?-918), one of the rebels who carved out their own petty kingdoms from the rapidly collapsing state of Silla, and established his own kingdom in 918. Wang Kon became the uncontested ruler of Korea in 935, at least of that part that was not in the hands of the Chinese or northern tribal peoples. Since Wang Kon had commanded a fleet of ships while in the service of Kungye, it might be expected that his reign would inaugurate a period of naval expansion, but there is no evidence of this in the available sources.6

About the beginning of the eleventh century Jurchen pirates began harassing the east coast of Korea. In response to these depredations the Koreans in 1009 constructed seventy-five snips of war called kwason 戈船 and stationed them at Chinmyonggu 鎭溟口 in the vicinity of modern Wonsan to defend the northeast coast of Korea from the inroads of the Jiirchen.7 The word *kwason* is a compound ot *kwa*, a lance with a hook or lateral blade below the main blade, and *son*, ship.

In 1019 a Jurchen pirate fleet of some fifty ships raided Tsushima and Iki, as well as some areas on the coast of northern Kyushu. These pirates carried off several hundred Japanese as captives.8 The fleet, while, sailing back to its base in Manchuria, was intercepted off Chinmyonggu [page 12] by the Korean kwason fleet stationed there. In the ensuing engagement eight of the pirate craft were captured. 259 Japanese, who were either picked out of the water or were aboard the captured ships, were returned soon thereafter to Japan by the Koreans. On their arrival in Japan two of the Japanese female captives described the kwason for Japanese officials. According to the women, the ship was high and large, carrying many troops. There were four oars on either side, each pulled by five or six men; thus the ship had some twenty or more oarsmen. There were seven or eight additional oars that were not used. The bow of the ship was covered with iron plates in such a fashion as to form a horn with which pirate vessels were rammed. Large stones were cast from the ship, probably by catapult, and did considerable damage to the pirate ships. The Korean personnel aboard wore iron armor and wielded both long and short spears as well as grappling hooks.9 In all probability the kwason was modelled on a Sung prototype.10

The vigor of the Korean reaction and its success in rapidly building and deploying a substantial fleet of effective warships substantiate the opinion of many historians that the eleventh century was the most dynamic period in Koryo history. It may be well that the ‘turtle boat’ was evolved from the kwason, but the subsequent decline of Korean interest in naval affairs over the next two centuries, until the Japanese rudely redirected Korean attention to naval defense, mitigates against a straight line development. The evolution of the ‘turtle boat’, however, is beyond the scope of this paper.11

The peace of Koryo’s marine frontiers was shattered after some two hundred years on 22 June 1223, when Japanese raided Kumju金州.12 With this raid the first stage of the so-called Wako raids began. The Japanese pillaged the Korean coast at sporadic intervals until 1265. By and large these depredations were on a minor scale, if compared with the later raids of the fourteenth century. Only one encounter at sea was reported and that was in 1226: the Koreans routed the Japanese taking two heads and the commander of the Korean forces reported that the raiders escaped under cover of darkness. This action took place off Sado 沙島,an island north of the better known island of Koje, which was made famous during the mid-twentieth-century ‘police action’ in Korea.13 [page 13]

The presence of Mongol troops in the late 1260s and the movement of large Mongol formations into Korea in the early 1270s in preparation for the invasion attempt on Japan deterred the pirates from continuing their raids. The Wako may have been larcenous, but they were not fools. To have challenged the Mongols, then at the peak of their military power, would have been insanity.

In preparation for the first attempt to invade Japan in 1274 the Mongols compelled the Koreans to build three hundred transport craft capable of carrying 40 to 45 men each. The Mongols tripled the requirement for the invasion fleet of 1281. For this second attempt the Koreans built nine hundred, carrying 85 men each, including the crew.14 The Koreans, moreover, were obliged to supply something like 15,000 men to man the ships that they built. This shipbuilding on behalf of the Mongols, a cruel burden to an already impoverished nation devastated by thirty years of Mongol military harassment and imposts, did not, however, contribute significantly to the naval establishment of Koryo. Most of the ships foundered in the typhoons that ended both invasion attempts, but on the other hand, building them contributed to reviving and sharpening the shipbuilding skills of Korea. The Mongols saw to it, however, that these skills should not be subsequently employed, when they forbade Korea to build warships in 1278.15 This in effect deprived the peninsula of any naval force to defend its coast when the Wako, resumed their depredations in 1350. By that time most of the shipwrights of the 1270s and 1280s had died of old age. The Korean defensive capability was further reduced in 1337, when Koryo’s Mongol overlords banned the possession of weapons by the Korean people.16 This ban was, no doubt, prompted by fear on the part of the Mongols, because of the rising tide of rebellion in China.

In March 1350 the Japanese resumed their raids against Koryo, striking against Kosong, Chungnim,17 Koje and other places—all on or off the fertile coast of Kyongsang Province in the area just west of the mouth of the Naktong River. The Wako, who were involved in the initial foray, were engaged and defeated by the local Korean military forces, who reported to the throne that they had taken more than three hundred heads. The entry in the Koryo sa for this event concludes with the comment, ‘The Wako incursions began with this.’18 Some writers have taken [page 14] this statement at face value and date the beginning of Wako activity with the year 1350, ignoring the thirteenth-century prologue. In a large sense they are correct, for the Wako were only a minor irritant in the thirteenth century, but in the latter half of the fourteenth century their depredations tore asunder the political, economic and social fabric of Korea. The frequency and scope of the raids increased in tempo and range after 1350, swelling to a crescendo in the 1380s and then gradually tapering off by 1419, with only sporadic raids in the next two centuries. The Wako began by seizing the Korean rice fleets that carried tax grain in the late spring and early summer from the rice producing southern provinces to the capital of Kory5, Songdo, the modern Kaesong.19 When, after a decade or so of losing the fleets to the pirates, the Koreans turned to transporting their rice from the south to the capital overland, the Japanese plunged inland to loot the granaries where the rice was stored through the winter.

Because of the earlier Mongol strictures, the Koreans lacked any sort of regular marine or naval establishment that could effectively cope with a major enemy threat at sea. There were several attempts in 1351 and 1352 to place troops aboard available shipping in the vicinity of the capital, but the Korean commanders of these improvised flotillas either withdrew before the Japanese ships or avoided closing with them.20 Except for the initial drubbing that the Wako received in 1350, they controlled the waters off Korea for more than twenty years thereafter. Attempts to engage them at sea usually ended in disaster for the Koreans. For example, by mid-summer 1358, since the Japanese had burned the Cholla Province tax-rice transport ships, and Wako raids and fear of them had brought the movement of rice from the south to the capital by sea to a halt, there was a serious rice shortage at the capital. Six Chinese were made ship’s captains and given command of ships of Chinese design with one hundred and fifty troops placed aboard. They were to sail to Cholla Province to obtain rice for the capital. Japanese pirates, however, intercepted them and, using the wind to their advantage, were able to set fire to the flotilla and defeat it.21 Another example is an event late in April 1364. The king commanded that a picked body of veteran troops from the northern marches be placed aboard eighty ships. The fleet was to proceed to Cholla Prov- [page 15] ince and then to convoy the tax-rice snips to the capital region. On its way south the fleet was warned by some people of Naep’o 內浦 in South Ch’ungch’ong Province, who had been captured by Japanese but had escaped, that the Wako were preparing an ambush and that the fleet should advance with caution. The fleet commander ignored this advice and sailed on with the beating of drums and battle cries. The fleet subsequently encountered two Japanese ships which feigned retreat; the fleet took up pursuit, but soon found itself surrounded by fifty Japanese ships. The ships in the Korean van were overcome by the Japanese. The commander, seeing the carnage, ordered a retreat, while his subordinate officers pleaded, ‘...why do you retreat? We beg you remain awhile for the sake of the country and smash the pirates.’ A number of junior officers fought their ships with great gallantry, especially Chon Sungwon 全承遠, who for some time resisted boarding attempts by the Japanese, until two Japanese ships closed on his beam. The crew, unable to repel the boarders, jumped overboard, and for a while Chon fought on alone. He was speared several times. At last he, too, jumped into the sea and swam to a small boat nearby, where he was helped into the craft by a soldier who himself had been wounded by arrows. After three days in their small craft they reached land. Only twenty of the original eighty Korean ships reached their home port The commander was ultimately tried and exiled.22

The tax-rice ships sortied in May 1364 and got as far as Naep’o before they were intercepted by the Japanese. More than half the Koreans aboard the ships were killed.23

In 1373 U Hyonbo 禹玄寶 (1333-1400) led others in recommending in a memorial to the throne that warships be built to intercept the Japanese at sea, for, as the memorial put it,

....Critics have said that, because the Japanese pirates are good sailors, we should not meet them in naval warfare. If we build ships, this would double the burden on the people. This is not so. Pirates cannot be attacked from land. That condition is very clean Moreover, in driving off pirates and preventing violence, our basic desire is on behalf of the people. Can critics think of minor distress of the people and give great grief to [page 16] the country?... when the pirates come sailing on the sea at will, our army stands on the shore and can do nothing more than look on with folded arms, even with a million picked troops. When it is a matter of water, what can we do? We ought to build ships, carefully equipped and armed, and, following the currents in long columns, block their principal routes...24

The great Koryo general, Ch’oe Yong 崔瑩 (1316-1388),who probably came to a similar conclusion independently, began to build warships in the same year. In the autumn of that year, 1373, the king observed a demonstration of the newly constructed warships and the testing of fire arrows and fire tubes. (The latter may have been a form of flame thrower.)25 The king must have been impressed, for at the end of the year the Korean court requested the Ming government to send gunpowder, sulfur and saltpeter for ships under construction.26

This was not, however, the first experimentation with firearms by Koryo. In 1356 ‘the ministers of the bureau of military affairs met at the Sungmun’gwan 崇文館27 to inspect weapons for the defense of the northwest frontier. A ch’ungt’ung 銃筒 gun tube was fired from Namgang 南岡 and the arrow fell to the south of Sunch’on-sa 順天寺 and buried its feathers (vanes?) in the ground.’28 The irony of this was that, although Koryo was being harassed from the sea by the Japanese, the major threat, as the Koreans saw it, was from the north. This threat was real enough. The Chinese were in rebellion against the Yuan dynasty and Koryo as a Yuan vassal state had lent some, if minor, military support to the Mongols; therefore the Chinese rebels felt that Korea had to be neutralized. The Red Turbans, the military arm of the White Lotus Society, invaded Korea in December 1359, and by January 1360 the city that is now Pyongyang had fallen to them. The Koreans rallied and drove the invaders back across the Yalu River in March. In November 1361 the Red Turbans again crossed the Yalu River, this time in force, and the capital fell to them in December; but by February 1362 the Koreans rallied once again to drive them back across the Yalu.29 In all probability the bureau of military affairs was looking for weapons of mass effect to use against concentrations of ground troops, therefore the possibilities of a point target weapon usable aboard a ship of war [page 17] against an enemy ship were lost upon the ministers. Over the next decade and a half it appears that this earlier ‘know-how’ in the use of firearms was lost and had to be relearned under increased pressure from the Wako. No doubt it was this pressure that prompted the tests in 1373, noted above, of incendiary arrows and fire tubes, but there is no evidence that these weapons were put to immediate use.

Early in 1374 naval forces were raised in Yanggwang (modern Ch’ungch’ong) and Cholla Provinces from islanders and others experienced in handling ships. This came about as a result of a memorial to the throne by Yi Hui 李禧 pointing out that conscripts unfamiliar with the sea were being put aboard ships to fight the Wako with disastrous effects to themselves and the Korean cause. He recommended that volunteers who were acquainted with ship handling should be recruited.

Ch’oe Yong, however, thinking along the lines of U Hyonbo’s memorial of the previous year, planned to build two thousand warships and place the entire Korean military force aboard them. This plan raised a storm of protest. His critics pointed out that farmers dreaded going to sea, and that more than half of those conscripted for duty aboard ships deserted.30 By May 1374 Ch’oe Yong, disgusted by the general opposition to his plan, asked to be relieved. Had his drastic measures been carried out Koryo might have been spared the depredations that were still to come.

Ch’oe Yong was much too valuable a general for the king to allow him to retire. Instead, the king entrusted him with the pacification of Cheju Island, which was then in rebellion. On 1 September 1374 Ch’oe Yong received the royal command to lead a force of 25,605 troops aboard 314 warships to put down the uprising, and by 4 October the island was pacified. Although the vessels were called warships, it seems likely that most, if not all, were transport junks, because, had there been that many warships, it is likely that the Koreans could have somewhat dampened the havoc that the Wako were still wreaking in coastal areas. As will be seen later, in 1380 Ch’oe Yong would complain that only one hundred warships were available for coastal defense. One wonders what happened to the other 214 ‘warships’ during the six year interval. A likely explanation is that the definition of ‘warship’ became more precise during that time span. [page 18]

The Chinese had meanwhile consented to deliver the gunpowder, sulfur and saltpeter that had been requested the year before. The Ming document accompanying these materials pointed out that China was in short supply of these items because of Wako depradations, but would stint herself to help a neighbor against their common foe.32

It was not until November 1377 that an event occurred that would lead to the passing of naval initiative from the Japanese to the Koreans, and, indeed, ultimately to the placing of superior fire power in the hands of Yi Sunsin a little more than two centuries later. Ch’oe Muson 崔茂宣 (d. 1395) learned the art of manufacturing gunpowder and firearms from a powder maker, Li Yuan 李元. Although the Koryo sa implies that Li was a Mongol, other sources indicate that he was Chinese. After long pleading, Ch’oe finally persuaded the state council to witness a demonstration of his cannons. The council was amazed at his cannon and pleased by the demonstration. A *hwat’ong togam* 火烔都監 [general directorate of firearms] was established at Ch’oe’s suggesuon.33 It was also fortunate that the government decided that year on a serious program of shipbuilding. Shipwrights and monks skilled in carpentry were mobilized to build ships of wan34 Because of a growing manpower shortage, merchants were sent from the market places to fill vacancies in the coastal armies, that were in effect destined for service aboard warships.35

In the spring of 1378 a force was trained in the use of hwap’o 火炮 [cannon] and in naval tactics.36 There were no apparent results until two years later. Then in the late spring of 1380 the king called upon Ch’oe Yong to assume the additional post of haedo tot’ongsa 海道都統使 [coastal provinces commandant], a title that carried with it responsibility for the naval defense of Koryo. Ch’oe Yong at first demurred, saying that only a hundred warships and barely three thousand troops were committed to frontier defense, (that is, for naval duty), that he would want ten thousand men, and that number would require an unsupportable drain on the treasury.37 Nevertheless, the old warhorse assumed the post. Perhaps it was in some measure the morale and discipline he imparted to the fleet, and the elan which characterized all units which served under him, as well as the new weapons, that led to Koryo’s greatest naval triumph over the Wako in the autumn of 1380. Five hundred pirate ships38 put into the estuary of the Kum River. Most [page 19] of the pirates went ashore to pillage the countryside systematically, while a fraction of their number remained behind to guard the ships. When the Korean Court learned of the landing, it ordered the new firearms to be tested against the Wako. Na Se 羅世 (1320-1397) commanded the fleet that was dispatched, and Ch’oe Muson was one of his subordinate officers. When the Korean fleet arrived off the mouth of the Kum River, the Japanese came out to do battle, unaware that the Koreans had a cannon aboard. Ch’oe Muson directed the firing of the cannon and other firearms, and soon the entire Wako fleet was in flames.39 This success led to further shipbuilding the following year.40

A naval victory of this order, although it could as well have been won by anyone else who could command the ear of the government, would not have been possible before Ch’oe Muson was able to capitalize on technology from China, and could develop an effective shipboard weapons system. The possibility suggests itself that the experiments with firearms in 1373 and those by Ch’oe Muson in 1377 may have been prompted by the success of Ming forces in 1371, when Chu Yuan-chang 朱元璋,the Hung-wu 洪武 Emperor, sent a riverine fleet against the self- appointed ruler of Szechwan Province. This fleet won the day, according to the annalist, ‘because of the use of huo-p’ao 火炮 [characters added] and huo-tung 火筒.’41 Some consideration should be given to the possibility that the Ming government may have sent conceptual ‘blue prints’ and technological ‘know-how’ along with the gunpowder, sulfur and saltpeter delivered to Koryo in 1375. On the other hand this does not accord with Ch’oe Muson’s recorded role in the development of cannon and firearms in Koryo. Still, Ch’oe’s informant, variously described as a Mongol powder master or a Chinese merchant, may well have been acquainted with the Ming government’s successful use of firearms aboard ships in 1371 and passed the information on to Ch’oe. If Li Yuan were, as the Yijo sillok has it, a merchant from south of the Yangtse River, that is from south China—which seems to be his more probable origin—he would likely have heard of the 1371 river campaign.42 There may have been other earlier Chinese sources of information on explosives and firearms that have gone unrecorded. For example, the presence of six Chinese who were made ship’s captains in 1358 may be recalled. That was, however, two years after the testing of a gun tube be- [page 20] fore the bureau of military affairs in 1356.

In the spring of 1383 reports reached the capital that 47 Japanese ships had sailed past Mokp’o up the Yongsan River to Naju and another 120 ships were off Kwanump’o 觀音浦 on the northeast coast of Nam-hae 南海 Island, Kyongsang Province. Unfortunately, an epidemic had swept through the Korean fleet and more than half its personnel had perished from the disease. The commander, Chong Chi 鄭地 (1347-1391), had also been stricken, but was recovering. He ordered the fleet to proceed at full speed toward the Wako concentrations and took a turn at the oars himself in order to spur on the crews. The Korean fleet finally encountered twenty Japanese ships and set seventeen of the twenty afire with firearms.43 With this victory behind him, Chong Chi called for the construction of more warships. The court gave its consent and despatched officials to the provinces to supervise the construction of additional warships.44

By 1384, although the Koreans may have felt otherwise, the tide had turned. The Wako were directing their major effort toward China.45 The shift was, no doubt, prompted by two factors: first, Korea had already been bled white in an economic sense ; secondly, and perhaps more importantly, the Korean fleet, now armed with cannon, was increasingly effective.

The king in the same year, as many a later western king would do, commanded that those who had been banished or exiled should be sent to the fleet, there to expiate their crimes at the oars.46

The Koreans, while continuing to be successful in defeating the Japanese at sea, took the offensive in 1385 and sent flotillas to offshore islands to drive off the Japanese who had settled on them.47 Many islands had been evacuated in the 1350s and 1360s and the Japanese had set up bases on them from which they harried the peninsula.48 Two years later the Japanese were rooted out of the island of Ch’uksan 丑山, off the east coast in the vicinity of Yonghae 寧海,a Korean garrison and warships were stationed at the island, and the Wako threat from that quarter was eliminated.49 The increased requirements for fleet personnel prompted a levy by lot of able-bodied men of the capital provinces to man the ships guarding the sea approaches to the capital,50 In this same year, 1387, Chong Chi called for a punitive expedition against Tsushima and Iki, [page 21] the major bases from which forays against Korea were launched. He pointed out that the fleet was skilled in naval warfare and much more adept in ship handling than the Mongols and Chinese had been at the time of the attempt to invade Japan in 1281.51

Before his plan was carried out, the king, Sin U (r. 1375-1388, in a foolish attempt to support the Mongols, ordered a campaign against Ming forces in Manchuria. This had a two-fold effect: there was a general withdrawal of troops from south Korea, resulting in a massive resurgence of Wako raids; and Yi Songgye (1335-1408, r. 1392-1398,posthumous title Taejo), who commanded the right column of the expeditionary force, mutinied at the Yalu River.52

Yi’s troops entered the capital on 6 July 1388, and one of Yi’s first acts was to have Ch’oe Yong exiled.53 With the great champion of the dynasty out of the way, the king, Sin U, could be deposed. Yi became the most powerful man in Korea, playing the role of king-maker until he had sufficiently consolidated his portion and could assume the throne himself in 1392.

Once Yi SSnggye, a man of action, had firmly gathered the reins of power into his own hands, he ordered the implementation of Chong Chi’s plan of 1387. This was carried out in March 1389. More than a hundred Korean warships attacked Tsushima. The Koreans burned over three hundred Japanese ships and set fire to most of the houses along the shore. They also liberated more than a hundred Korean men and women who had been captured by the Wako.54 Koryo in its waning years had finally struck at the most important base from which the Wako launched their forays against her. Although raiders from Tsushima were a major element among the Wako that attacked Korea, Tsushima had played an additional role as rendezvous area and coordinating center for Wako from Kyushu and the shores and islands of the Inland Sea, because the natives of Tsushima had a greater familiarity with the geography of Korea and the situation within the country, and could give guidance to raiding parties unfamiliar with the area.

Late in 1389 the commander of the naval forces of Yanggwang Province (embracing much of North and South Ch’unghch’6ng Provinces and the southern part of Kyonggi Province) was charged by royal decree with tightening discipline among his officers. He was to try by court [pag22] martial any who ‘...secretly hid and anchored in deep inlets and were unequal to meeting a situation...’55 This was followed in February 1390 by the appointment of an inspector-general of naval affairs for the provinces of Kyongsang, Yanggwang and Cholla.56 At the end of 1391 a general mobilization of men from coastal districts was ordered by the council of state.57 Thus on the eve of the overthrow of Koryo’s Wang dynasty, Korea was moving into a position of naval superiority vis-avis the Japanese pirates.

By way of summary it may be noted that the Mongol prohibition against the Koreans building warships put Koryo at a distinct disadvantage in coping with the Wako raids from their onset in 1350 and for some thirty years thereafter. Korea, lacking a navy, concentrated her troops in strategic areas. The Japanese, who controlled the seas around Korea, for the most part merely avoided those areas when they landed to pillage, although on a number of occasions the Wako engaged Korean troops in pitched battles. Korean chronicles mention the word ‘warship’ almost from the beginning, but what went under the name of navy prior to 1373 was ground troops placed aboard transport junks. Ch’oe Yong, seeking to remedy the situation, instituted a warship construction program in 1373, but, because of widespread opposition, it did not get off the ground until desperation at massive Japanese depredation forced a shipbuilding program in 1377.58

Although there had been experimentation with gunpowder as early as 1356,this was not followed up until 1373, when fire arrows and fire tubes were put aboard warships for testing. Training began in earnest in 1378 with the arming of warships with cannon. The new weapons apparently were not employed against the Wako, however, until the signal victory off the mouth of the Kum River in 1380. The incendiary effect of the Korean attacks involving the new weapons raises the question of their exact nature, and one wonders what type of projectiles the cannon were firing. These projectiles may well have been finned arrows with an incendiary charge such as are illustrated in Boots’s article.59

By 1385 the Koreans had assumed the offensive at sea and Wako activities correspondingly took a decided drop. The security that the state of Koryo had achieved with its new navy was undercut by what was, in the hindsight of history, a most foolhardy move, the attempt to attack [page 23] Ming China in order to support the already moribund Yuan dynasty. This played into the hands of Yi Songgye, who had become Koryo’s most successful and popular field general since advancing years and honors had moved Ch’oe Yong to the position of commander-in-chief at the capital, no longer able to take the field in person. Exploiting the almost forty years of unrelieved misery brought about by an unholy alliance of Wako depradations and natural calamities, Yi Songgye could invoke the then very real concept of ‘the mandate of Heaven’ and take the throne. Even before he became king in 1392 he realized the importance of the navy. By redeploying troops, he put an end to, or, more accurately, curbed, the resurgence of Wako activity that had accompanied the withdrawal of Korean troops from the south in 1388. He gave the naval forces a greater dignity, apart from the land forces. The Korean navy under Yi Songgye, and subsequently under his sons, by 1419 virtually eliminated the Wako as a threat to Korea. Thereafter the Wako became in essence a Chinese problem.

The Koryo navy, in spite of the fact that it did not exist as a separate service, reached its epitome under Yi Songgye; but it was the product of the vision and courage of such men as U Hyonbo, Yi Hui, Chong Chi, Ch’oe Muson, Na Se and, last but not least, Ch’oe Yong. Because of his staunch loyalty to the Koryo royal house, Ch’oe was executed by adherents of Yi Songgye, but not even the Yi dynasty historians could withhold the encomium that Ch’oe Yong so richly deserved; ans they did not dare to stigmatize him as a traitor or evil minister, as they did the other high officials at the end of Koryo who did not become Yi supporters.

[page 24]

**NOTES**

1 For a brief survey of Hideyoshi’s invasions see: Takashi Hatada, A History of Korea, translated and edited by Warren W. Smith, Jr and Benjamin H. Hazard. (Santa Barbara: Clio Press 1969) pp. 75-7.

2 Capt. George M. Hagerman USN. ‘Lord of the Turtle Boats’ United States Naval Institute Proceedings 93, 12 (December 1967) 68-75. John Van Duyn Southworth The Ancient Fleets (New York: Twayne Publishers, Inc., 1968) pp. 347-51.

See also: Carlo M. Cipolla Guns, Sails and Empires: Technological Innovations and the Early Phases of European Expansion, 1400-1700 (New York: Minerva Press 1965) fn. 1, pp. 123-4.

3 An example of a work that claimed to be a naval history ‘From the hollowed-out tree trunk to the latest nuclear submarine’ but neglected any mention of Korea is Jacques Mordal, Twenty-five Centuries of Sea Warfare, translated by Len Ortzen (New York: Bramhall House 1965).

4 Edwin O. Reischauer Ennin’s Travels in Tang China (New York: The Ronald Press Co., 1955) pp. 293-99.

5 Robert Karl Reischauer Early Japanese History (c. 40 B.C.-A.D. 1167) Princeton: Princeton University Press 1937) A 234,235,262,276.

Mori Junsaburo 森潤三郞, Chosen nempyo 朝鮮年表[Korean chronology]. (Tokyo: Shunyodo 1904) pp. 232,234,239.

6 Imamura Tomo 今村鞆 Fune no Chosen 船の朝鮮 [The Korea of ships] (Seoul, Raen shoya, 1930) p. 3.

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7 Chung bo munhon pigo 120: lb.

8 Reischauer Early Japanese History A 327.

9 Fujiwara no Sanesuke 藤原実資 (957-1046),Shoyuki 小右記 Diary of Goononomiya Udaijin 後小野宮大臣 (diary covers the years 978—1032, parts missing), quoted in Ikeuchi Hiroshi 池内宏 Mansen shi kenkyu chuse 滿鮮史研究中世 [Studies in Manchurian and Korean History, the middle ages] (Tokyo: Yoshikawa Kobun kan 1947) I 313.

10 See: Lo Jung-pan, ‘The Emergence of China as a Sea Power during the Late Sung and Early Yuan periods’ Far Eastern Quarterly XIV 4 [page 25] (August 1955) 500.

11 It is interesting to note that in 1371 Ming Chinese ‘...boats’ prows were protected by a covering of iron, and at this spot firearms... were stationed.’ L. Carrington Goodrich and Feng Chia-sheng Isis XXXVI 2 (January 1946) 121.

12 Chong Inji 鄭麟趾 et al., compilers, Koryo so 高麗史 [History of Koryo]. Compiled 1451. Yonse University edition (Seoul, Yonse taehak 1956), 22: 23b. Hereafter cited as KS.

13 KS 22: 29a. For a fuller discussion of Wako activities between 1223 and 1263 see: Benjamin H. Hazard, The Formative Years of the Wako, 1223- 63,’ Monumenta Nipponica XXII 3-4 (1967) 260-77.

14 Horace H. Underwood, ‘Korean Boats and Ships’, Transactions of the Korea Branch of the Royal Asiatic Society XXIII (1934) 44-5. The transactions will hereafter be cited as TKBRAS.

15 An Chongbok 安鼎福 (1712-1791) Tongsa Kangmok 東史綱目 [Summary of eastern (Korean) history]. (Seoul: Chosen kosho kanko kai 1915) III 295.

Paek Namun 白南雲,Chdson hoken shakai keizai shi 朝鮮封建社会経済史 [Feudal, social and economic history of Korea]. (Tokyo: Kaizo sha 1937) I 510.

16 KS 35: 35a

17 KS has Chungmal 竹抹,an error for Chungnim 竹林.

See: Nam Sumun 南秀文 et al., Koryo sa choryo 高麗史節要 [Summary of the history of Koryo]. Compiled 1451-2. (Tokyo: Gakushu in 1960) 26 : 4a-4b. Hereafter cited as KSC.

Yang Songji 梁誠之 and No Sasin 盧思慎 Sinjung Tongguk yoji sungnam 新増東國與地勝覧 [Revised survey of Korean geography]. 1530 edition. (Seoul: Tongguk munhwa sa 1958) 32: 41b.

18 KS 37: 21b.

19 Marugame Kinsaku 丸亀金作,’Korai no juni soko ni tsuite’, 高麗の十二 漕倉に就いて[Regarding the twelve transport (tax-rice) storehouses]. Shigaku zasshi 21 (August 1935) 143-6.

20 KS 37: 24a; 38: 7a, 10b, 12a.

21 KS 39: 24b.

22 KS 40: 37a; 114: 23a-24a.

23 KS 40: 37a-37b.

24 KS 115: 28b-31b.

For a translation of most of the rest of the memorial see: Benjamin H. Hazard Japanese Marauding in Medieval Korea: The Wako Impact on Late Koryo. (Unpublished doctoral dissertation, University of California, Berkeley 1967) pp. 164-6.

25 KS 44: 16b. [page 26]

The arrows may have been similar to models of incendiary arrows (arrows to which a tube containing a charge with fuse is attached) to be seen in the museum at the Hyonch’ung-sa 顕忠祠 (Shrine to Yi Sunsin), South Ch’ungch’ong Province.

What went under the name of a navy prior to 1373 was ground troops placed aboard junks. This would also apply to ‘warships’, warships in name only. Seno Mayu 瀬野馬fig ‘Wako to Chosen suigun’ 倭寇と朝鮮水軍 [The Wako and the Korean navy] Shigaku zasshi 26,1 (January 1915) 25.

26 KS 44: 19a-19b.

27 The Sungmun’gwan was an office for high officials. Paek Chosen hoken... I 491-2.

28 KS 81: 18b-19a.

Yi Kibaek 李基白 Koryo sa pyonggi yokchu il 高麗史兵志訳註一 [Translation with notes of the military monograph of the Koryo sa (History of Koryo) I] (Seoul: Koryo sa yongu hoe 1969) p. 104.

Ho Sondo 許善道 ‘Yomal Sonch’o hwagi ui paltal’ 麗末鮮初火器의 發達 [The development of firearms at the end of Koryo and in early Choson] Yoksa hakpo 24 (July 1964) 9.

Ch’oe Songnam 崔碩男 Flan guk sugun sa yon’gu 韓國水軍史 [A study of the history of Korean navy]. (Seoul: Yongyang sa 1964) p. 137. The arrow may have been with metal vanes rather than fletched with feathers, similar to that illustrated in Ch’oe, op. cit., p. 451.

29 KS 39: 25b, 29b-31b, 39a-40b; 40: la-lb.

30 KS 83: 31a-31b.

31 KS 44: 31b-32a.

32 KS 44: 29b.

33 KS 133: 31b.

Yang and No Sinjung Tongguk yoji sungnam, 2: 24a-24b.

T’aejo sillok 太祖實錄 Yijo sillok 李朝實錄 [Yi dynasty veritable re-

cords] (1392-1910) (Seoul: Kuksa wiwon hoe 1955) 7: 8b-9a I,77.

Ch’oe Han’guk sugun sa yon’gu p. 137.

Ho ‘Yomal Soncho hwagi ui paltal’ Yoksa hakpo 24: 13-16.

Yi Koryo sa pyonggi yokchu il, p. 138.

Yukkun sagwan hakkyo Han’guk kunsa yon’gu sil 軍士官學校韓國軍事研究室 [Military Academy Korean Military Affairs Research Office] (Ho Sondo, editor) Han guk kunje sa: Kunse Choson chon’gi p’yon 軍制史近世朝鮮前期篇 [History of the Korean military system: Modern Choson, early period] (Seoul (?): Yukkun Ponbu [ROK Army Headquarters] 1968) pp. 391-2.

J. R. Partington A history of Greek fire and gunpowder (Cambridge: W. Heffer & Sons, Ltd., 1960) p. 276. [page 27]

J. L. Boots, ‘Korean Weapons and armor’, TKBRAS XXIII 2 (1934) 120-1.

Ch’oe Muson is also variously known as Ch’oe Haesan 崔海山,Ch’oe Kongson 崔功孫 and Ch’oe Sik 崔湜 See: Ho Yoksa hakpo 24: 16.

34 KS 81: 25a; 133: 24 -24b.

Yi Koryo sa pyonggi yokchu il p. 132.

35 KS 81: 31b.

This entry is under ‘navy.’

36 KS 133: 35b.

37 KS 133: 39b-40a.

Although the terms navy and naval have been used, the army and navy formed a single service. See: Horace H. Underwood ‘Korean boats and ships’ TKBRAS XXIII (1934) 49.

38 Taejo sillok has three hundred ships. Taejo sillok 7: 8b-9a Yijo sillok, I 77.

39 KS 134:19b.

KSC 31:20a.

40 KS 134:31a.

41 Goodrich and Feng Isis XXXVI (2) 121.

The authors cite the Ming shih 明史 [History of Ming] 129:12 and the Ming shih-lu 明實錄 [Veritable records of Ming] Ming T’ai-tsu shih-lu 明太祖實錄 [Veritable records of Ming Tai-tsu (Chu Yuan-chang)] section 66. The Ming Tai-tsu shih-lu gives more details on the river campaign of 1371.

42 Taejo sillok 7:8b; Yijo sillok I: 77.

Ho Ydksa hakpo 24 (July 1964): 15.

43 KS 113: 57a-58b.

KSC 32: 5b-6a.

Ch’oe Han’guk sugun sa yon’gu, pp. 144-9.

44 KS 135: 19b.

45 Nakakoji Akira 仲小路彰 Bahamsen-sen, Wako 八幡船戰 (委寇 [Hachiman ships war-Wako] (Tokyo: Senso Bunka kenkyujo 1941) p. 60.

46 KS 135: 21b.

47 KS 135: 31b-32a; 40a.

48 KS 136: 19a, 21a-21b.

49 KS 113: 61b.

KSC 32: 44b.

An Tongsa kangmok IV 217.

50 KS 83 : 31b-32a.

51 KS 113: 58b-59a.

52 Hatada History of Korea, p. 60

KS 137: 115-125, 14a. [page 28]

53 KS 137: 17b-19b.

54 KS 116: 20b-21a.

Tsushima kyoiku kai 對馬敎育會 Kaitei Tsushima to shi 改訂對馬島誌 [Tsushima island record] Rev. ed. (Nagasaki Prefecture: Tsushima kyoiku kai 1940) pp. 273-4.

Ch’oe Han’guk sugun sa yon’gu, pp. 149-50.

55 KS 83: 32a.

56 KS 45: 14b-15a.

KS 34: 52b.

57 KS 83: 32a-32b.

58 Underwood estimated that a Koryo ship carried eighty-five men, based on the data of the Mongol invasions. Underwood, ‘Korean boats and ships, TKBRAS XXIII (1934) 45.

Large warships of the early Yi dynasty carried 80 men. Imamura Fune no Chosen, p. 3.

59 Boots ‘Korean weapons and armor’ TKBRAS XXIII (1934) plate 21.

See also: Han’guk kunje sa: kunse Choson chon’gi p’yon, pp. 414-15.