

faces on one side and were flat on the obverse (Birket-Smith and de Laguna, 1938:75). The same was true for the Kutchin knives (Jones, 1867:322). Since these are the only references to this type of blade, its distribution is limited to the northern Northwest Coast and Eastern Alaska.

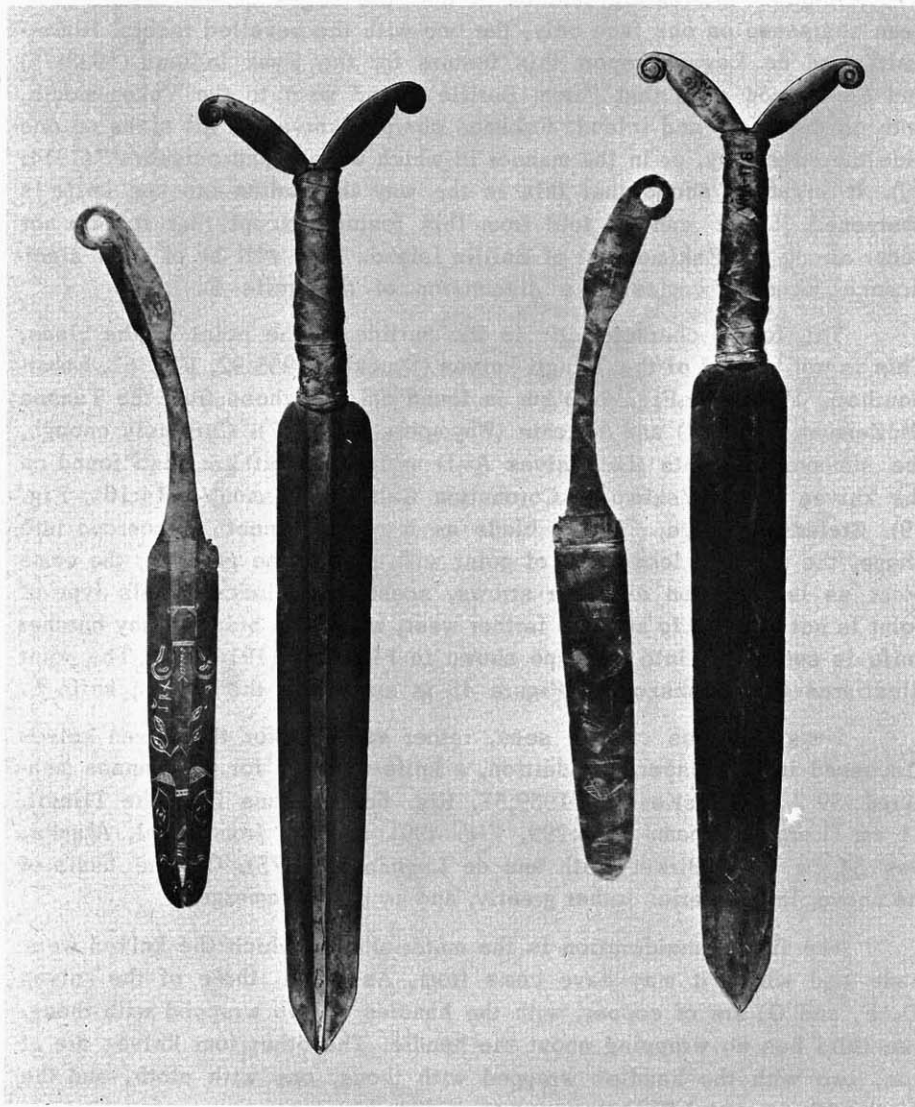
Another interesting feature is that the edges of the blades have been sharpened on one face only, the one with the bevelled facets. Birket-Smith and de Laguna report this feature for the Eyak Indians (1938:75) and Stefansson adds that "from Baillie Island west to the Yukon mouth, both on the coast and inland, Eskimos sharpen knives of all sizes on one side the edge only, or in the manner in which we sharpen scissors" (1914:99). It might be added that this is the way the Indian crooked knife is sharpened. Little can be told from this feature except that it does not occur among the Eskimo east of Baillie Island. This will be of some significance when it comes to a discussion of the knife E.

The fourth characteristic is the outline of the point of the blade. This is not typical of the Tlingit knives (Drucker, 1955:92, Fig. 61, Leroi-Gourham, 1946:299, Fig. 499) but is found only on those from the Tanana (McKenna, 1959:57) and Kutchin (Whymper, 1869:247). Curiously enough, the subconical points that knives A-D and G exhibit are also found on the knives of the Eskimo of Coronation Gulf (Stefansson, 1914:101, Fig. 49). Stefansson says, "If the blade as a whole cannot be coerced into shape, the peculiar local type of point will at least be given it; the same point as is found on all their arrows, spears, and lances. This type of point is not familiar to me from farther west, where the blade of any butcher knife is soon filed into the type shown in Fig. 45" (1914:101). The point illustrated by Stefansson in Figure 45 is similar to the one on knife E.

Length is, as can be seen, rather variable for the seven knives discussed in this paper. In addition, a knife reported for the Tanana measured $39 \frac{1}{2}$ cm (McKenna, 1959:57, Fig. 6c) and one from the Tlingit, 41 cm (Leroi-Gourham, 1946:299, Fig. 499). Another from Taral, Alaska, was 34 cm long (Birket-Smith and de Laguna, 1938:75). On the basis of the above, length varies rather greatly, and no pattern emerges.

The final consideration is the material from which the knives were made and where it may have come from. As noted, three of the knives (D, F, and G) are of copper, with the handles of two wrapped with thong. The third has no wrapping about the handle. The other four knives are of iron, two with the handles wrapped with thong, one with cloth, and the fourth with a vegetal fibre.

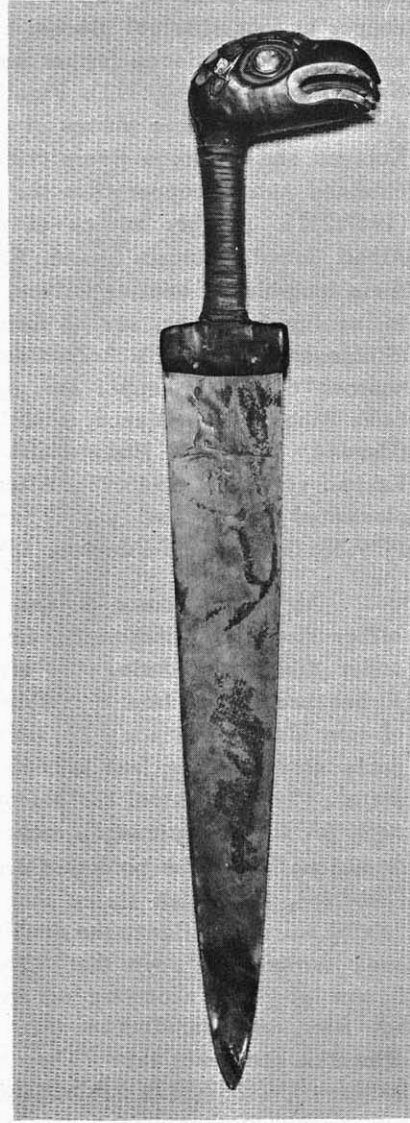
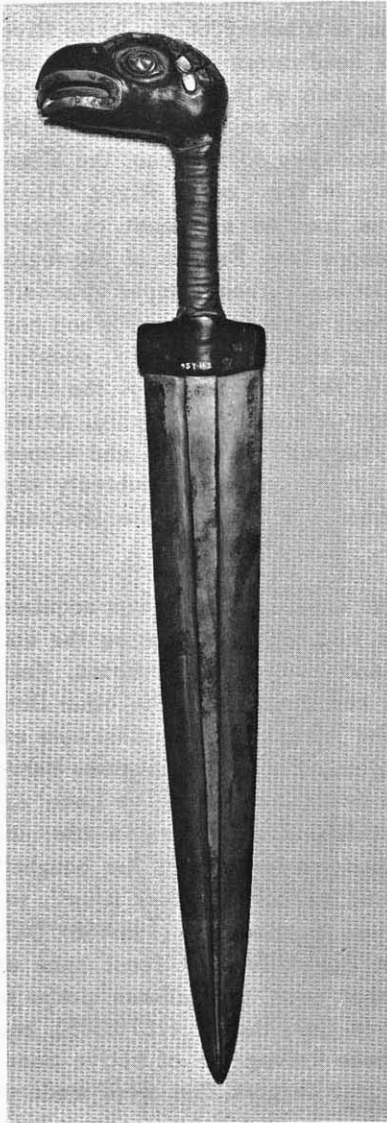
Possible sources of native copper are examined first. According to Mason, copper was obtained from near the mouth of the Coppermine River, and the Yellowknife Indians "made knives and various other implements of copper and traded them to other peoples of the region" (1946:24). In the vicinity of the Wrangell Mountains, Alaska, to the north of which is the Tanana River and to the west and south the Copper River, copper



Knives. F (left), G (right).

float has been reported. Abercrombie wrote that "It is not uncommon to find nuggets of native copper in the shape of float, varying in size from small birdshot to pieces weighing many pounds" (1900:29). Further on in his report he stated, "The Indians on the Nabesna had bullets, knives and arrow points made of native copper." It is said that they obtained the copper at four different places, namely from a tributary of the White River and three other places farther west on the headwaters of the Tanana and Nabesna rivers (1900:111). Finally some Indians at the mouth of the Kotsena River had some pieces of copper which they said they got from the Kotsena and Chettyna rivers (1900:169). According to Barbeau, the Sitkas obtained native copper from the inhabitants of the Copper River, Alaska (1947:211). Another source of copper was located northeast of Prince Albert Sound, Victoria Island. From this copper the Eskimo of the region made long-bladed hunting knives, ulus, whittling knives, copper foreshafts for sealing harpoons, and so forth. Such items were traded south and east (Stefansson, 1914:113). Accordingly, as far as the evidence goes, possible sources of native copper are reported only for the country of the Slave Lake Athapaskans (Mason, 1946:24), Tanana (McKenna, 1959:58), Ahtena (Osgood, 1937:102; Birket-Smith and de Laguna, 1938:75), and Copper Eskimo (Jenness, 1946:97). After contact, trade copper undoubtedly supplemented the native supply obtained from southern Alaska (Rickard, 1939:38; Couture and Edwards, 1962).

As for the source of iron, there is no question that it was acquired, either directly or indirectly, from traders who were penetrating the area under discussion during the eighteenth and nineteenth centuries. Knife E has been made from a double-cut file, and presumably the other three of iron also were made from files. That the Athapaskan peoples were capable of fashioning iron into knives is attested in the literature. Mason states, "Iron and steel are seldom worked by the natives [Slave Lake] except for the omnipresent crooked knife which is made from a file, and occasionally for the points of arrows. Other iron implements are bought" (1946:24). McKenna states that the Tanana used "old steel files" for making knives similar to the double spiral type reported here (1959:58). Dall goes further and says that "The Hudson Bay knives—at least such as I saw at Fort Yukon—are so worthless that even the Indians prefer to buy files, and manufacture their own knives from them" (1870:105), and Schwatka comments that "They tell me these knives are of native manufacture..." (1887:232). Niblack says "The first daggers that were made of steel, after the advent of the whites, were converted by the natives from large flat files..." (1890:285). Although the evidence strongly suggests that the Athapaskans manufactured their own knives, there is the intimation that at times Euro-American blacksmiths may have made them for the natives. Whittaker speaks of a blacksmith at Kitigagzuit making a steel snow knife for an Eskimo, although later the Eskimo remade it (n.d.:133ff.). In speaking of the peoples of the northern Northwest Coast,



Knife. Probably of Tlingit origin.

Drucker says that the first European explorers found double-bladed iron daggers in use and that the traders had quantities of these knives made by the ship's armorers for trade (1955:93).

Besides the metal from which the knives were made there are the materials with which the handles were wrapped. Judging by the specimens discussed in this paper, three materials were used. These were hide thong, vegetal fibres, and cloth strips. The latter, of course, is a product of Euro-American contact. The Tanana knife handles were "padded with leather" (McKenna, 1959:58), the Eyak handle "was wound with skin..." (Birket-Smith and de Laguna, 1938:75), the Kutchin had theirs wrapped with thong (Dall, 1870:105), and the Tanana or Kutchin had handles "wrapped with moose leather so as to give the hand a good grip" (Schwatzka, 1885:232). The Eskimo use 'spruce roots' with which to wrap the handles (Whittaker, n.d.:133ff.) or the split roots of the arctic willow (Stefansson, 1914:99). From the available evidence, the knives used by the Athapaskans had the handles wrapped with strips of hide (or cloth) and those of the Eskimo often with a vegetal fibre.

On the basis of the above information, what conjectures can be made as to the provenance, place of manufacture, age, and use of knives A-D and G?

On the available evidence they must have come from the Tlingit of northern British Columbia or one of the Athapaskan groups in Alaska: Ingalik, Eyak, Ahtena, Tanaina, Tanana or Kutchin, or perhaps the Han of the Yukon Territory on the basis of specimen G. Only according to Petitot is it possible to assign one or more to the Eskimo about the mouth of the Mackenzie River. The copper one (A) could have come from the Eyak, Ahtena, Tanaina, Tanana, or Tlingit, a more restricted distribution than for those made of iron. The other copper knife (G) most likely came from the Han.

Although the provenance of these five knives can be established with a fair degree of certainty, their place of manufacture does not coincide necessarily with this same extensive area but is likely more restricted. Certainly this is the case for the copper knives. This type was manufactured by the Tanana and Ahtena and from their country traded to the Tanaina, Eyak, and, most likely, the Tlingit. There is no evidence that the Ingalik or the majority of the Kutchin had knives made of copper. The Peel River Kutchin had few or no copper-bladed knives although they said that some Yukon tribes had them (Osgood, 1937:70). The Crow River Kutchin did not have copper knives, but they were traditionally known from the upper parts of the Yukon (Osgood, 1937:75), and this would support the contention that knife G was from the Han.

The age of knives A-D and G is even more difficult to ascertain. The first evidence for this style of knife is that recorded in the drawings by Murray who was in the Kutchin country as early as 1847. This certainly

does not establish a date when they first came into being, since Euro-Americans were only just beginning to penetrate this part of Alaska and since knives of this style could be earlier and unrecorded, although unlikely to have been made of iron. Although no further information has been found regarding this particular style of knife previous to this date, knives were observed which were apparently prototypes of the style under discussion. Dixon who was on the Northwest Coast between 1785 and 1788 illustrates a knife with a Y-shaped proximal end and with three facets on the reverse side of the blade, but unfortunately the obverse side is not shown (1789:plate facing p. 188). It was collected at Port Mulgrave (Yakutak Bay?). During the same period, Portlock said that the Tlingit (?) had knives from Prince William Sound (?) which were double pointed, whereas at Prince William Sound and the Copper River delta the natives had knives with the end of the handle "excurvated" (1789:260-1). These presumably were similar to that illustrated by Dixon. If this style is the prototype, and McKennan is of this opinion (1959:60), then some suggestions can be made as to the age and origin of the knives that have been discussed in this paper. Archaeologically, there is as yet no evidence for knives of either style (de Laguna, 1934 and 1956) within the area under discussion, although copper was used aboriginally (de Laguna, 1934 and 1956; Rainey 1939). Furthermore, there is no evidence for such knives having been used in northeastern Siberia (Levin and Potapov, 1956) nor elsewhere in North America, and Leroi-Gourham argues against a Siberian origin (1946:299). Knives of unrecorded material and style were, however, in use by the natives at the time of first contact, since Waxell who accompanied Berhing wrote, "Only one of them had a knife at his side. This knife was made in a fashion quite unknown to us. It was about eight inches long and in front, broad and thick" (1952:117). This further suggests that the type of knife observed some forty years later by Dixon and Portlock was not of Russian introduction, assuming a similar style. Waxell was in the area of Prince William Sound, perhaps at Kayak Island. Since this is the situation at present, one can only conclude that the style of knife with the proximal end in the form of a Y was developed by peoples living in the Copper-Tanana river basins of eastern Alaska within the historic, perhaps protohistoric, period. If the spiral hilt variety developed from the Y-shaped hilt, this development must have happened during the first half of the nineteenth century, the style being first perfected in copper. At the same time, copper knives were being traded to the peoples of the Prince William Sound region. This trade has a respectable antiquity. Saur, who visited Prince William Sound in 1790 as secretary to the Billings Expedition, said that the inhabitants of the Sound obtained "knives, copper kettles, and instruments..." from people fourteen days journey to the north (1802: 195-6, fn. 197), most likely the Ahtena of the Copper River. Furthermore, it can be suggested that the idea of such knives diffused northward into the upper Yukon. The knife obtained from the Ingalik may have reached the area through trade or may have been of local manufacture.

The final point to be discussed regarding knives A-D and G is their use. It is said of the Eyak that "Even the women used these daggers for cutting up fish and game..." (Birket-Smith and de Laguna, 1938:75). Schwatka reports that "In hunting moose in the summertime, while these animals are swimming across the lakes or broad streams... these Ayans [and in fact several tribes below them on the river] do not hesitate to jump on the animal's back in the lake or river, leaving the canoe to look after itself, and dispatch the brute with a hand knife, cutting its throat or stabbing it in the neck..." (1885:232), and *Whympier* illustrates such a form of hunting somewhere along the Yukon between the mouth of the Tanana and Fort Yukon (1869:244). This is not much to go on but does give some insight into the use made of these knives.

Knives E and F remain to be discussed, though not a great deal can be said regarding them. The single outward flaring spiral at the proximal end and the particular cross-section of the blade of knife E align it with those with the two spirals. Yet its larger size, handle wrapped with vegetal fibre, and single cutting edge sharpened on one side only, set it apart from these. These three features suggest that it comes from the Fskimo who, from Baillie Island west to the mouth of the Yukon, sharpen their knives from one side of the blade only (Stefansson, 1914:99). Moreover, among the Eskimo, knife handles are frequently wrapped with a vegetal fibre. Furthermore, the length of the blade is in range with that of their snow knives. This information, although meagre, suggests that this knife comes from some Eskimo group residing most likely somewhere between Baillie Island and northern Alaska and was used as a snow knife. Nothing pertinent can be said regarding knife F.

In summary, one may say that knives A to D, inclusive, come from somewhere in eastern Alaska or northern Yukon Territory or the immediately adjacent section of the Northwest Territories. Knife D, of copper, most likely comes from somewhere along the Copper or Tanana rivers. Knives F and G may also have originated there. Knife E, although the evidence is meagre, may have come from the Arctic Coast somewhere between Baillie Island and north Alaska. The copper knives probably date from the last half of the last century, and the fact that knife G was collected between 1901 and 1906 tends to confirm this date. The three iron knives (A to C) could date from this same period or the early part of the twentieth century. It is difficult to hazard a guess as to the age of knife E except to say that it is pre-1920, the date at which it was acquired by the Royal Ontario Museum.