

SWORDS IN THE PETUN COUNTRY

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Abstract:

Swords and sword fragments from archaeological sites in the Petun country are reported and discussed.

Un compte rendu des épées et des morceaux d'épée trouvés aux sites archaéologiques dans le pays de Petun.

Illustrations (page 2a)

- a: sword terminology (Blair & Tarassuk 1982:260)
- b: Champlain with sword 1609 (Champlain 1925 II:100-101)
- c: French men with swords 1615 (Champlain 1929 III:74-75)

Figures:

Some figures are accompanied by profile and/or cross-section drawings where considered useful. The cross-section illustrated between 4a and 4b applies to both. Original shapes and outlines have been reconstructed in some drawings of corroded artifacts.

Figure 1: Two-edged, straight "rapier" sword (page 7a)

- 1a: Collingwood Museum X976.942.1 (unprovenienced)(Table 1.1.1).
- 1b: cross-section of blade of sword 1a at the guard.

Figure 2: Artifacts made from the ricasso/upper blade segments of two-edged swords (page 7a)

- 2a: Petun Collections HL4: curved chisel edge; one channel (Table 1.2.1).
- 2b: Collingwood Museum X975.935.1 marked "Bell": chisel edge, one channel (Table 1.2.2).
- 2c: Collingwood Museum X975.927.1: curved chisel edge, three channels (Table 1.2.3).

Figure 3: Artifacts made from blades of two-edged swords (page 7b)

- 3a: Petun Collections HL4: scraper ? (Table 1.3.1)
- 3b: Petun Collections HL5: scraper ? (Table 1.3.2)
- 3c: Petun Collections PR19; scraper ? (Table 1.3.3)
- 3d: Petun Collections CR6: spatulate blade scraper (Table 1.3.4)
- 3e: Petun Collections PM5; fragment, possibly a point (Table 1.3.5)
- 3f: Collingwood Museum X975.920.1: spear point ? (Table 1.3.6)

Figure 4: Artifacts made from the pointed tip end of two-edged sword-blades (page 7c)

- 4a: Petun Collections RB1: single-barb harpoon (Table 1.4.1).
- 4b: Petun Collections HCL 100s0e: barbed and tanged projectile point (Table 1.4.2).
- 4c: Petun Collections HL4: point of sword (Table 1.4.3).
- 4d: Petun Collections CR8 45n20eA: point of sword (Table 1.4.4).
- 4e: Petun Collections McA 28w0sD: point of a sword (Table 1.4.5)
- 4f: Royal Ontario Museum 956.4.15: point of sword (Table 1.4.6).

Introduction:

In Maine, 1604-1605, and Ontario, 1615, Samuel de Champlain witnessed Indians hunting with pikes tipped with sword-blades. He also stated that the Hurons buried sword-blades in ossuaries (Champlain 1922 I:309, 1929 III:61, 163, 371-372, 1932 IV:250). In Huronia, 1623-1624, Gabriel Sagard observed "Since our Frenchmen have brought sword-blades to Canada the Montagnais and Canadians make use of them both in hunting moose and in war against their enemies, and these, fastened to long wooden shafts like demi-pikes, they are able to hurl straight and hard" (Sagard 1939:155). In Acadia, Nicolas Denys observed that the Micmac native people of his day, instead "of arming their arrows and spears

with the bones of animals, pointed and sharpened, they arm them today with iron, which is made expressly for sale to them. Their spears now are made of a sword fixed at the end of a shaft seven to eight feet in length. These they use in winter, when there is snow, to spear the Moose, or for fishing salmon, Trout and Beaver. They are also furnished with iron harpoons. .. With respect to the hunting of the Beaver in winter, .. they have .. arrows and harpoons armed with iron.." (Denys 1908(2)442-443).

That in his first sentence Denys is referring to iron stemmed arrow points and lanceolate spear blades (Fitzgerald 1992:109) seems a reasonable interpretation. These were made expressly for the trade with the Indians. Whether the swords and harpoons mentioned later were also made expressly for sale to the Indians is not clearly stated. Spears are mentioned twice, once as armed "with iron, which is made expressly for sale to them", and once as "made of a sword fixed at the end of a shaft". The reader is left to decide if one or two methods of arming are described, and if swords were made expressly for the purpose.

The Micmac traded with the French and the Basques. The Basques supplied two-edged swords (Turgeon 2001:77 citing Whitehead 1993:49-70).

The Ontario references are clear that only the blades of swords, not complete swords with hilts, were supplied by the French for the Indians to use in hunting and as ossuary offerings. The archaeological evidence in the Petun country is that whole sword blades were deposited in ossuaries, but partial blades were used for hunting. To attach the full length of a sword blade to a shaft already seven to eight foot would surely create problems in balance, trajectory and transportation, hardly aiding the ability of the user to "hurl straight and hard". Sword blades were cut up into fairly uniform lengths, the pointed tip used as described and the other segments used to make more points, and for other purposes.

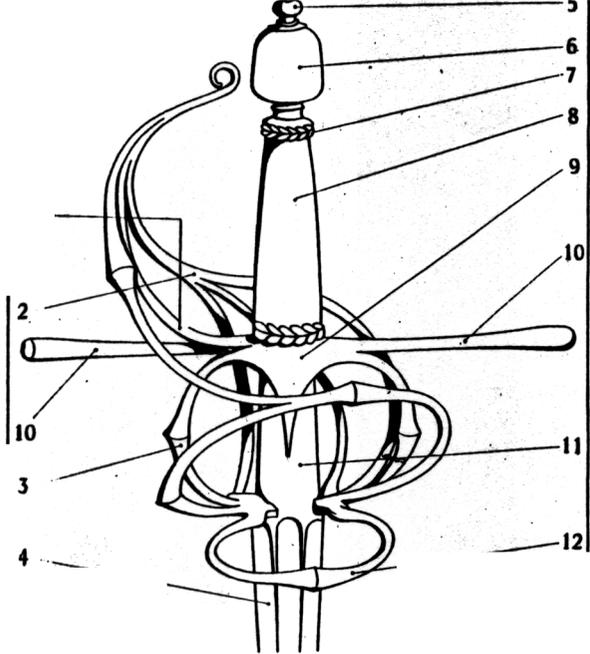
The eyewitness descriptions of the various uses of sword-blades in Ontario were made the early 1600s, i.e. GBP2 (Glass Bead Period 2), yet mentions of swords and sword fragments are strangely rare in the published archaeological record of that period. It seems cutting the blades into segments and adapting the segments for other uses made their origin as sword blades difficult to recognize today (e.g. possibly Carruthers 1966:Plate VIIAa; Lennox 2000:125 Figure 37b).

The absence of swords and blades in later periods is explained by their being supplanted by firearms. During the time of the Petun in Ontario, flintlock muskets were introduced which displaced not only the seemingly more cumbersome earlier matchlock muskets but eventually also the "cheap sword" many musketeers carried (Roberts 2002:9,10). The process of replacing swords with firearms was well advanced in GPB3 in the Petun country. A gun barrel was reportedly found in the early GBP3 Ferguson BcHb-4 ossuary (Wintemberg 1923), and "flintlock guns" in the later Buckingham BcHb-24 ossuary (Hunter n.d.). A European gunflint is identified at the GBP3 Plater-Martin BdHb-1 site (Fox 1971).

Gun parts and flints were present at Ste. Marie I (Kidd 1949:90, 123-125, 128, Plate XLVII; Tummon & Gray 1995:54), although there perhaps tainted by the varying presence of French soldiery after 1644. At Ste. Marie II, a ram-rod worm was found (Carruthers 1966 Plate VIII Ab). No sword-blades or derived artifacts were found in the Petun post-Dispersal occupation of Rock Island, Wisconsin, ca. 1650-1653), nor were loaded onto the ship 'Griffon' in 1679, nor were exported to the Illinois country in 1688, but flintlock muskets, gun parts, balls, and/or accessories were present in all these instances (Mason 1986:199, 213-214; Quimby 1966:64-65). This otherwise clear picture of the cessation of swords as trade items before the Dispersal is confused by the reported presence of an iron harpoon made from a sword blade, and other dagger or sword parts, at a village site at St. Ignace, Michigan, assigned to the post-Dispersal "Tionontate Huron" ca. 1671-1705 (Branstner 1992:177, 184). That stone projectile points, knives and scrapers were present with gunflints, gun parts, musket balls and shot, raises the possibility that there were more than one occupation on this site.

The French Sword at the time of the Petun

The 17th Century French exclusively preferred the straight-bladed, two-edged, pointed thrusting "rapier" sword for fighting on foot (Blair & Tarassuk 1982:402, 472, 473; Evangelista 1995:491; Reid 1976:98), not only because of "the superiority of the thrust to the cut" (Burton 1987:133; Evangelista 1995:491),



Hilt of a swept-hilt rapier. 1. knuckle guard; 2. counter-guard; 3. arms of the hilt; 4. blade; 5. button; 6. pommel; 7. ferrule ("Turk's head"); 8. grip; 9. quillon block; 10. quillons, fore and rear (or cross guard); 11. ricasso; 12. side ring.

a



b



Illustrations

- a: sword terminology
(from Blair & Tarassuk 1982:260)
- b: Champlain with sword 1609
(Champlain 1925 II:100-101)
- c: French men with swords 1615
(Champlain 1929 III:74-75).

but because the alternative one-edged curved-bladed "sabre" was better adapted for fighting from horse-back or chariot (Burton 1987:127). That the French in New France carried straight-bladed "rapier" swords, appropriate to men on foot, is confirmed in Champlain's illustrations (Illustrations `b' and `c').

The principal weapons of Champlain and his men in illustrations of the attacks on the Iroquois in July 1609 and again in October 1615 were muskets, both the heavier matchlock, one of which is shown supported on a forked musket rest during the 1615 attack, this being necessary for aiming the heavy weapon accurately (Reid 1976:610), and the lighter `arquebus' version, which did not require a rest. Swords were carried as secondary weapons; "most musketeers carried a cheap sword" (Roberts 2002:10). Swords visible in the illustrations are in straight scabbards about the same length as the firearm, ca. three feet long (Champlain 1925 II:between 100 & 101; 1929 III:between 74 & 75). The hilts of the swords, where visible, appear to have pronounced pommels and a knuckle-guard with curving and shaped quillons (cross-guards), and other elaborations of the guard (see Illustration `a', `b', `c' page 2a).

Champlain's sword in 1609 does not appear to be any more elaborate as a "status" weapon than the swords of his subordinates in 1615. For this reason the historical accuracy of the illustrations of the musketeers' swords might be challenged as artistic conventions rather than historically accurate representations. The principal intent of the illustration of the 1615 attack was to show the fortifications of the Iroquois village, not the swords of the attackers (Champlain 1929 III:75-76). Swords accompanying French matchlock musketeers in 1612 (Roberts 2002:14) appear to be about a foot longer than those of Champlain's men in New France. It was at this time in the 17th century that the previous trend to complex hilted long swords peaked and reversed to return to shorter, more efficient swords. The three-foot-long straight swords of Champlain and his men, "cheap" or not, appear to be approaching the "peak of practical efficiency in combat .. with the development of the swift little small-sword in the France of Louis XIV" (Oakeshott 1991:1). Coincidentally or not, the three-foot blade length seemingly favoured by Champlain and his men was established in English law as the maximum size of a rapier straight two-edged blade, to curb the trend to longer blades (Evangelista 1995:491). In contemporary New England, the sword worn by John Smith while trading with the Indians was straight (Hume 1994:195).

Because the making of sword blades was highly specialized, there was an international trade in blades rather than complete hilted swords. Blades of French swords were likely imported wholesale from Spain, Italy and Germany, and the hilt mounted locally according to the current fashion and fancy of the retail purchaser (Blair & Tarassuk 1982:403; Reid 1976:124). It would be convenient to re-export blades unhilted, just as they were received.

The preference for the pointed, straight, two-edged "rapier" sword in France and New France is echoed in the Petun country where all artifacts certainly recognised as derived from swords are from such blades. A sword in the Collingwood Museum collection (Table 1.1, Figure 1), although unprovenanced and even shorter, seems to fit well into the Petun period.

Swords Recorded in the Petun country:

When the Petun country was "dug over" in the 1840s and 1850s a number of swords were found (Jardine 1934:22-23), inferentially in ossuaries or other graves. Andrew F. Hunter recorded that in the 1880s "an enormous copper kettle .. sword and other relics" were exhumed west of Stayner (Hunter n.d. #99)(Lamont BcHa-8 site, marked as an ossuary by Boyle 1889:9 map). Andrew Birtles took two swords "from a grave or a large hole" on his farm, "They were in good shape, only the handles were gone. One of them was longer than common with two edges; the other was of ordinary size... They were beautifully forged" (Duggan BcHa-11 site)(Jardine 1934:23).

William L. Smith wrote that "one of the strangest finds was in the Indian graveyard on the second concession of Nottawasaga, consisting of a number of sabres, tied together, which apparently had never been used. A pioneer took three of these sabres to serve as a trap for deer that had been feeding on his oat crop. He set the sabres point upwards, covered with light brush as a screen, at a place where the deer had been jumping into the field. Next morning an animal was found impaled, but unfortunately it was the best horse on the farm. It is said that another of these old sabres, which doubtless came from France, served for years as guard for the portals of an Orange Lodge" (Smith 1923:156). A second

account of the same find informs that it was made about 1855 on the McBeth farm and comprised "a bone hole in which five brass kettles, five swords some over four feet long, were found. A great quantity of amber coloured beads were also found .. One of the swords was kept in the Orange Lodge in Creemore for many years" (Creemore Star July 2, 1908). A third account said "In pit on Reazen's farm was a bunch of swords with points in a pot filled with beads" (Webster n.d.). Finally, during his archaeological survey of the Petun area, William J. Wintenberg recorded on June 30 1923 "Near Reasins's on the McBeth farm .. was found a bone hole in which brass kettles, five swords, some over four feet long, were found. A great quantity of amber colored beads were also found, some fifty-three years ago (i.e. 1870). One of the swords was kept in the Orange Lodge in Creemore for many years" (Wintenberg 1923). A. McBeth and Thomas Reazen (Reasin) were successive occupants of the same property. All four accounts presumably apply to the same McBeth BcHa-4 Ossuary, the probable site of which was relocated in 2002. The Creemore Orange Lodge building was originally built in 1858 south of the village, moved downhill into Creemore and raised onto a concrete basement in 1923, sold to the Order of the Eastern Star in 1965, converted to a private residence around 1994, and still stands today. All the published accounts use the past tense to imply the sword was no longer in the Orange Lodge building, although a local informant thought the sword had survived until being stolen about 1960. An examination of the building by this writer in 1965 confirmed there was no sword there at that time.

In 1923 William J. Wintenberg recorded that a sword had been found on the McQueen farm (Young-McQueen BcHb-19 site); that Andrew Melville had "part of what may have been a sword or rapier" (Melville BbHa-7 site), and that the James Cook collection (Haney-Cook Lower BcHb-27 site) included "Part of a narrow sword or rapier blade" (Wintenberg 1923). The last is the only one of these three artifacts to have certainly survived. Through the intercession of Edward H. Thomas at the time the Cook farm was auctioned in the 1950s, the James Cook (Adams/Cook) artifact collection was withheld from the sale and donated to the Royal Ontario Museum (ROM). Examined in 2002, courtesy of Dr. Mima Kapches, artifact 956.4.15 was found to be the point of a sword, some 17.6 cm. long, tapering to a point from a maximum width of 15 mm., lenticular/bi-convex in cross-section, maximum 5 mm. thick (Table 1.4.6, Figure 4f, page 7c).

The Melville BbHa-7 site is said also to have produced a rapier, with handle missing, subsequently given to a museum in Barrie earlier than the present Simcoe County Museum (Carruthers 1968) and now lost.

Artifacts excavated by the University of Toronto in 1953 (MacMurchy BcHb-26 site) included "A six inch harpoon point, made from a steel sword blade" (Bell 1953). Bell is unique, and presumably mistaken, in stating the artifact was made of steel rather than iron. Other sword samples seen by the writer all appear to be iron, which the Petun evidently had little difficulty cutting, shaping and bending.

Unprovenient as to site was an "old short sword" owned by Dr. Stephens, the first doctor in Nottawasaga township ca. 1851 or 1852, given to him "by a farmer who used it to cut thistles". The sword had "VIVE LE ROY" on both sides of the blade (Jardine 1934:21,23). A sword in the Collingwood Museum (X976.942.1)(Figure 1, page 7a, Table 1.1) complies with this description.

David Jardine presumed the two swords in the Duggan BcHa-11 Ossuary originally had handles, now "gone". As noted above, these swords probably never had handles but were traded as blades. At least one, being "longer than common with two edges" (Jardine 1934:23), was, by definition, a "rapier". The same description, i.e. a rapier without a handle, applies to the blade from the Melville BbHa-7 site reported by Dr. Carruthers (1968).

Rapiers and Sabres in the Petun country

In the forgoing accounts, two types of sword are mentioned, "rapier" and "sabre". Wintenberg equated the term "rapier" with "narrow sword" for the partial blade he recorded at James Cook's (Haney-Cook Lower BcHb-27 site) in 1923 (ROM 956.4.15)(Table 1.4.6, Figure 4f, page 7c).

As above, at the time of the Petun, French swords for men on foot were exclusively of the "rapier" type. The Petun adapted the rapier type blade into artifacts, presumably appreciating the cross-sectional symmetry of the blade. All Petun sword-derived iron artifacts are from "rapier" type blades.

A "sabre" has only one cutting edge, on the outside of a somewhat curved blade which is triangular in cross-section with a thin point, intended for cutting or slashing. In the story of the farmer who impaled his horse, William L. Smith's use of the term "sabre" raises doubt. A "sabre" would not be suitable for the use to which Smith said the "sabres" were put. A sabre would be unlikely to impale in the manner described. The other accounts of the McBeth BcHa-4 Ossuary swords simply state "swords". That some were "over four feet long" makes it more probable these were "rapiers" (Evangelista 1995:491), i.e. long two-edged swords, like the one described for the nearby Duggan BcHa-11 Ossuary (Jardine 1934:23), inferentially pointed. It is probable therefore that Smith's use of the term "sabres" is too casual, and that the swords in the McBeth BcHa-4 Ossuary were actually "rapiers". This probability is supported by the fact that all recognised sword fragments found in the Petun country are from "rapiers".

The conclusion that the French brought into the Petun country only straight two-edged "rapier" swords, and no "sabres" at all, is not in conflict with the presence in the Huron Institute Collection, Collingwood Museum, of a "sabre" blade which, from its corroded condition, appears to be of considerable age (X975.142.1). Experts advise this weapon was of a later period than the Petun, in fact a "yataghan" style sword-bayonet of a type that replaced the socket-bayonet toward the end of the seventeenth century (Blair & Tarassuk 1982:80; Reid 1976:19,124), "very common 1800 to about 1856" (Warren Wheatfield email July 7, 2002) or even later (Jean-Pierre Chrestien email July 29, 2002). This style of blade was not used by the French at the time of the French-Petun interaction, and no artifacts made from this sort of blade have been recognised on Petun sites. It was therefore not of the Petun period and consequently it has no further relevance to this paper except to confirm that the "sabres" found in the McBeth BcHa-4 Ossuary were more likely actually "rapiers".

Swords at Ste. Marie I and II:

This paper does not undertake a review of sword fragments found outside the Petun country, but the records for Sainte-Marie Among the Huron at both locations (Ste. Marie I and II) were examined for comparison because Ste. Marie was the headquarters of the Jesuit Mission of the Apostles to the Petun, and because of other evidence that the Petun were in contact with Sainte Marie (Fox 1971; Garrad 1993, 1997:6).

Excavations at Ste. Marie I in the 1940s (Kidd 1949), 1950s (Jury & Jury 1954) and 1987-1990 (Tummon & Gray 1995:54) did not produce a single sword-blade or a certainly recognisable artifact derived from one. Two sword-guard fragments indicate that at least one, possibly two, swords were present. The first fragment (Kidd 1949:122A) is a perforated basket guard with little similarity to the hilt on the Collingwood Museum sword, but the second (Kidd 1949:122B) has recurved quillons somewhat like that on the Collingwood Museum sword, but detached from the guard. Kidd thought them to be probably both from the same weapon (Kidd 1949:123). This weapon would seem more likely to be evidence of the French soldiers who resided at Sainte Marie at various times from 1644 to 1650, rather than of trade with the Indians. The specimen "of unknown use" illustrated on Plate XLVI d, may also be part of a sword guard.

Although sword-guards were present, there were no blades, or artifacts recognised as made from blades, in the 63 types of iron objects recognised by Kidd, even though these collectively comprised "the greatest number and most diversified assortment of iron tools and hardware ever to be recovered from a site of French occupation in the New World". However there were also "numerous specimens which cannot be identified" (Kidd 1949:91), and "unrecognizable pieces of iron", "quantities of iron scrap" (Jury and Jury 1954:42,51). Not impossibly there may be unrecognised sword fragments among them. A specimen described as a flat bar with a sharpened tapered edge, 8¼" long and 1 3/16" wide (21 x 3 cm.), was "thought to be a draw shave, although it may be considered by some to be part of a sword blade" (Kidd 1949:90,108,110,122-123,186,Plate XLIIc,XLIIg). The cross-section profile is not given, but with only one edge the piece is by definition not a two-edged "rapier" sword.

Similarly, Ste. Marie II produced "ninety-three unidentifiable fragments of iron material" together with other iron hardware and fragments (Carruthers 1966:28-29). One of the latter, of uncertain use (plate VII A), bears a strong resemblance to an adapted piece of sword blade in the Collingwood Museum (X975.927.1; item 1.2.3 below).

The Jesuit records for the Ste. Marie I period, or indeed throughout the nearly two centuries of recorded Jesuit history in Canada, make no mention of swords among the pre-Dispersal Huron/Petun (JR73:350). The impression is given that by the time of Sainte Marie, 1639-1649 (GBP3), sword-blades were no longer traded and used as they had been previously.

The Sword and Sword-Derived Artifacts in the Collingwood Museum Huron Institute Collection:

In the foregoing record of swords found in the Petun country, two types are mentioned, "rapier" and "sabre". Fortunately, the Huron Institute collection in the Collingwood Museum includes one of each, both unprovenanced, but allowing comparisons. The "sabre" X975.142.1 has already been discussed above and dismissed as later than the Petun period. The "rapier" sword X976.942.1 will be reported in detail below (Table 1.1; Figure 1, page 7a).

By comparison with the "rapier" sword, a possible spear point and two chisel-like artifacts (X975.920.1, X975.927.1, X975.935.1) are recognised as adapted from the ricasso sections (see Illustration `a', page 2a) of two-edged swords. Only one of these items is reasonably provenanced as to site (Bell BcHb-11), but all are accepted as from the Petun country because this is where the Huron Institute collected (e.g. Creemore Star 1908). Measurements and other details will be found in Table 1, below. The two chisel-like artifacts correspond with a third of known provenience in the Petun collections.

Sword Fragments and Derived Artifacts in the Petun Collections.

Several iron objects found on Petun archaeological sites are recognised as adapted from fragments of sword-blades.

A single-barb harpoon (Table 1.4.1, Figure 4a, page 7c) from the GBP2 Rock Bottom BcHb-20 site, and a barbed and tanged point (Table 1.4.2, Figure 4b, page 7c) from the GBP2b-3a Haney-Cook Lower BcHb-17 site, are both bi-convex in cross-section, and correspond well to the tip of the Collingwood museum's two-edged "rapier". Sword-blades appear to have been purposefully cut in measured lengths to be adapted for specific uses, such as scrapers, wedges, unfinished points and/or harpoons. These lengths are between 8.3 cm. (Table 1.3.4, Figure 3c, page 7b) and 10.5 cm. (Table 1.3.1, Figure 3a, page 7b).

The point HCL 100s0e (Table 1.4.2, Figure 4b, page 7c) and the partial blade Royal Ontario Museum 956.4.15 (Table 1.4.6, Figure 4f, page 7c), are from the same site (Haney-Cook Lower BcHb-27) but not from the same sword because in each case the narrowest part of the blade and the tip are involved. The length of the latter specimen is 17.6 cm., about twice that of the fragments mentioned above.

The varying width and thickness dimensions of the Petun sword fragments may be because they came from different parts of tapering blades. It is also probable that swords, being individually hand-made, varied in their dimensions, as did iron axes. It is also possible, if swords were made "expressly for sale" to the Indians, that, like axes (Fitzgerald 1992:101, 103-104), they reduced in dimensions and weight through time.

Channels

Channels, also called grooves, flutes, "cannelures", "fullers" or "blood grooves", are intended to both lighten and strengthen or stiffen sword-blades (Burton 1987:132). Four iron sword fragments from the Petun area have such channels. One (Collingwood Museum X975.927.1, Table 1.2.3, Figure 2c, page 7a) has three channels; one (Collingwood Museum X975.920.1, Table 1.3.6, Figure 3d, page 7b) has two channels; and two (Petun collections HL4, Table 1.2.1, Figure 2a; Collingwood Museum X975.935.1, Table 1.2.2, Figure 2b, page 7c) have one channel. How far the channels extended from the ricasso (see Illustration `a' page 2a) along the blade toward the tip or point is not known. In three specimens (Figure 2) the channels are terminated at the ground cutting or chisel working edge.

The substantially complete two-edged "rapier" in the Collingwood Museum (X976.942.1, Table 1.1.1, Figure 1a, 1b, page 7a) has no channels. In this instance the same lightening and strengthening effects are created by flattening the two outside angles of the earlier-period diamond or lozenge cross-section shape so that the cross-section became a six sided hexagon (Figure 1b, page 7a).

Swords as Chisels

It has been observed from visual examination of smelted copper and brass forms recovered from contact period archaeological sites elsewhere in Ontario that manufacturing actions were likely carried out using metal tools rather than with lithic tools such as chert slivers (Anselmi 2002). As far as is known the French did not import metal chisels, or tools which could serve as chisels (e.g. screwdrivers), for trade. Three chisels and two screwdrivers found by Kenneth E. Kidd at Ste. Marie I are unique to the site, as are other tools which, from their drawings, appear capable as serving as improvised chisels. Kidd regarded the chisels and screwdriver as 'building tools' (Kidd 1949:98 Fig.15d, 103-4, 105-6, plates XXXIII, XL). The chisel illustrated (plate XXXIIIa) may well have been a stonemason's tool. Another chisel found at Ste. Marie I is not described (Jury & Jury 1954:42) and consequently is not considered further. Iron tools with cutting edges available to the Petun would presumably be limited to axes, knives, swords, and projectile points. Three of the four ricasso segments from the Petun country appear to have been adapted as chisels, and two of these in the Collingwood Museum (X975.935.1 Figure 2b, and X975.927.1 Figure 2c) show use-wear compatible with their use as chisels. It remains to be demonstrated experimentally if they, and/or knife blades and other edged tools, were used to fracture smelted copper and brass.

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TABLE 1 Sword, and Sword-Derived Artifacts from Petun Area Archaeological Sites

("Petun collections" are the various collections curated by the Petun Research Institute, which may be accessed through the writer. Dimensions and shapes of corroded artifacts may be estimated).

1.1 Two-Edged Straight "Rapier" Sword (Figure 1, Page 7a).

1.1.1 (Figures 1a, 1b): Collingwood Museum X976.942.1 (unprovenienced): a substantially complete sword comprising a straight two-edged pointed blade symmetrical in cross-section, a partial (broken), moderately complex guard, and a recent wooden handle, or grip. The sword as is measures some 61 cm. long overall, including the guard and the wooden grip which evidently replaced the original. The full length of the original sword, with full hilt, grip and pommel, would have been somewhat longer.

The blade itself is about 48.7 cm. long from tip to hilt, maximum 35 mm. wide and 8 mm. thick at the hilt, hexagonal in cross-section with six flat faces for most of the length of the blade. It reduces in shape and dimensions towards the point, but tapers so gently that for much of the blade's length the two edges appear to be parallel. It becomes bi-convex towards the point. It is a little bent. The edges of the blade are not at all sharp. The tip is more rounded than pointed. It may have been broken and reshaped, and originally longer.

The wooden grip or handle is loose enough that the shoulder of the blade can be seen extending into it as a tang through the guard. The grip is secured by a bolt or rivet through a washer, which may be original, but that there is no formal pommel, and the handle or grip is plain wood, although well shaped, indicates it is a replacement.

The guard is broken and incomplete but sufficiently present to show it was heart-shaped and made of brass in one piece without perforations. Stiffening ridges follow the edge of the guard and across the centre of the heart, where there is a slot for the blade tang. The centre stiffening ridge extends at both ends beyond the guard as a quillon. At the top of the heart the quillon turns away from the grip to terminate in a tear-drop. At the bottom or point of the heart there is sufficient remaining quillon turned upward toward the pommel before the break to suggest that it originally extended to the pommel as a knuckle guard. In this there is similarity to the cross-section view of the guard found at Ste. Marie I (Kidd 1949:122 Fig. 21B).

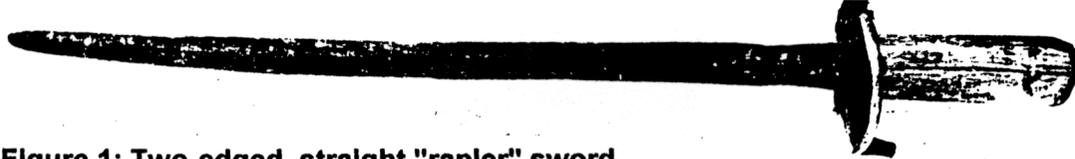


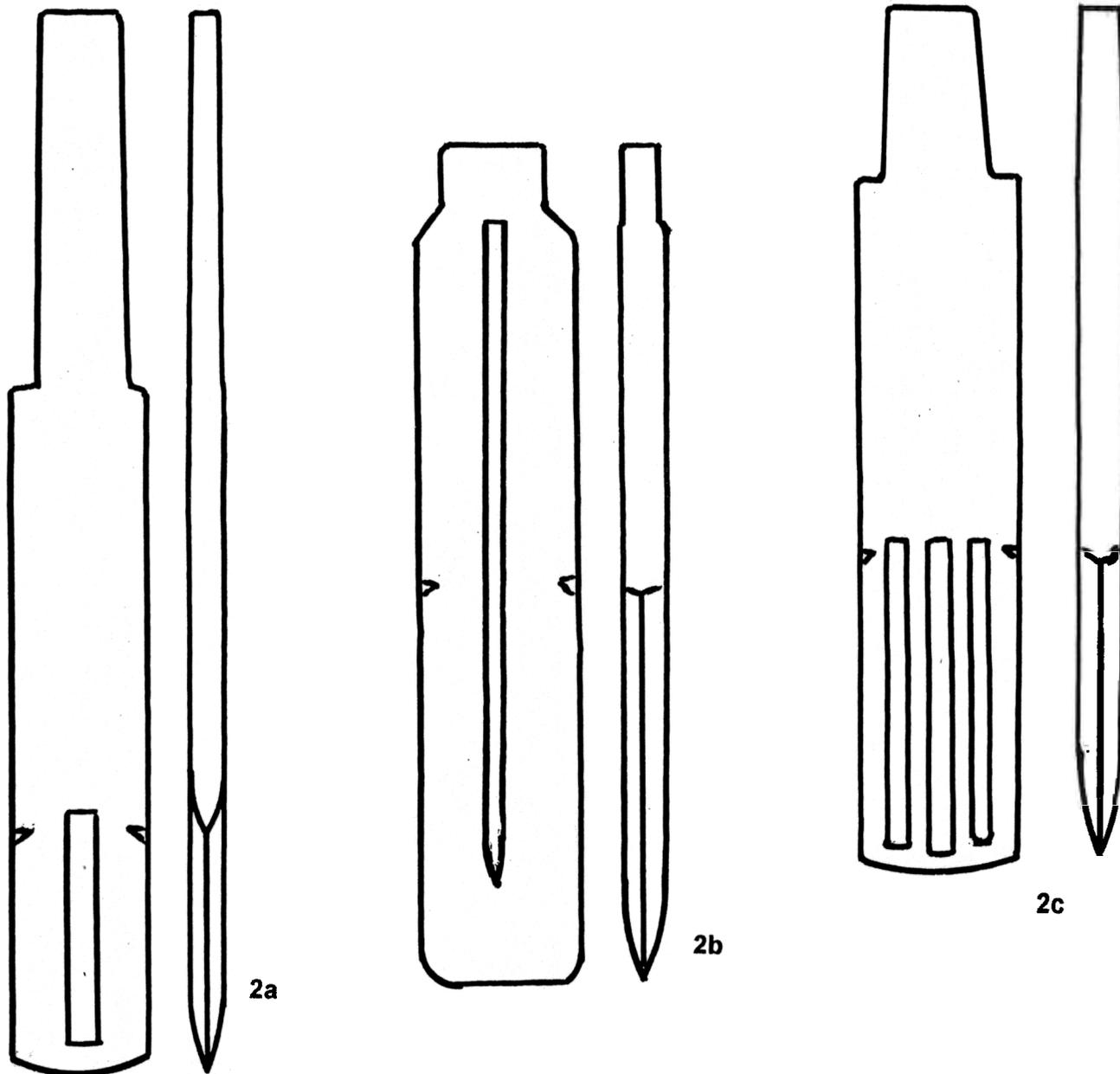
Figure 1: Two-edged, straight "rapier" sword

1a: Collingwood Museum X976.942.1 (unprovenienced)(Table 1.1.1).

1b: cross-section of blade of sword 1a at the guard.

1a

1b



2a

2b

2c

Figure 2: Artifacts made from the ricasso/upper blade segments of two-edged swords

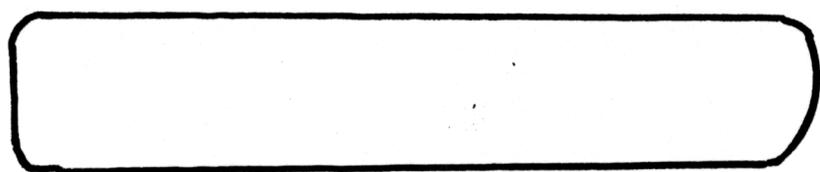
2a: Petun Collections HL4: curved chisel edge; one channel (Table 1.2.1).

2b: Collingwood Museum X975.935.1 marked 'Bell': chisel edge, one channel (Table 1.2.2).

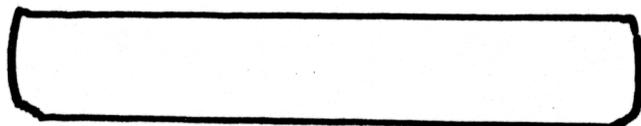
2c: Collingwood Museum X975.927.1: curved chisel edge, three channels (Table 1.2.3).

Illustrations are actual size, except 1a.

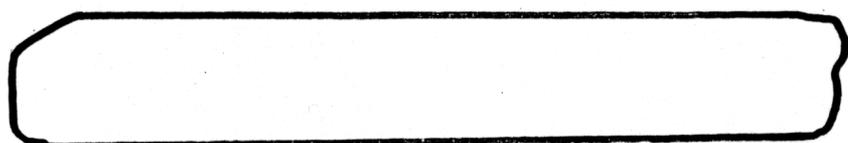
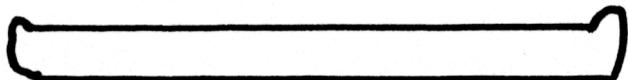
7b



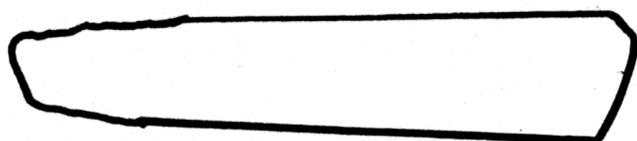
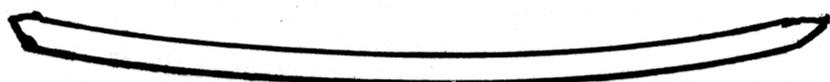
3a



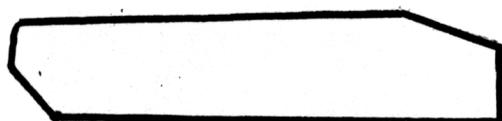
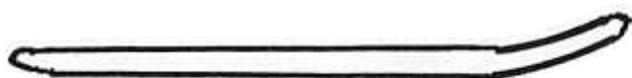
3b



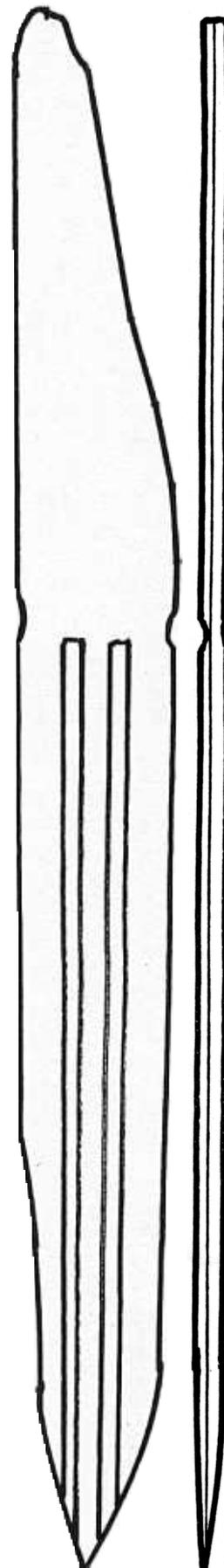
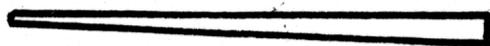
3c



3d



3e



3f

Figure 3: Artifacts made from blades of two-edged swords

3a: Petun Collections HL4: scraper ? (Table 1.3.1)

3b: Petun Collections HL5: scraper ? (Table 1.3.2)

3c: Petun Collections PR19; scraper ? (Table 1.3.3)

3d: Petun Collections CR6: spatulate blade scraper (Table 1.3.4)

3e: Petun Collections PM5; fragment, possibly a point (Table 1.3.5)

3f: Collingwood Museum X975.920.1: spear point ? (Table 1.3.6)

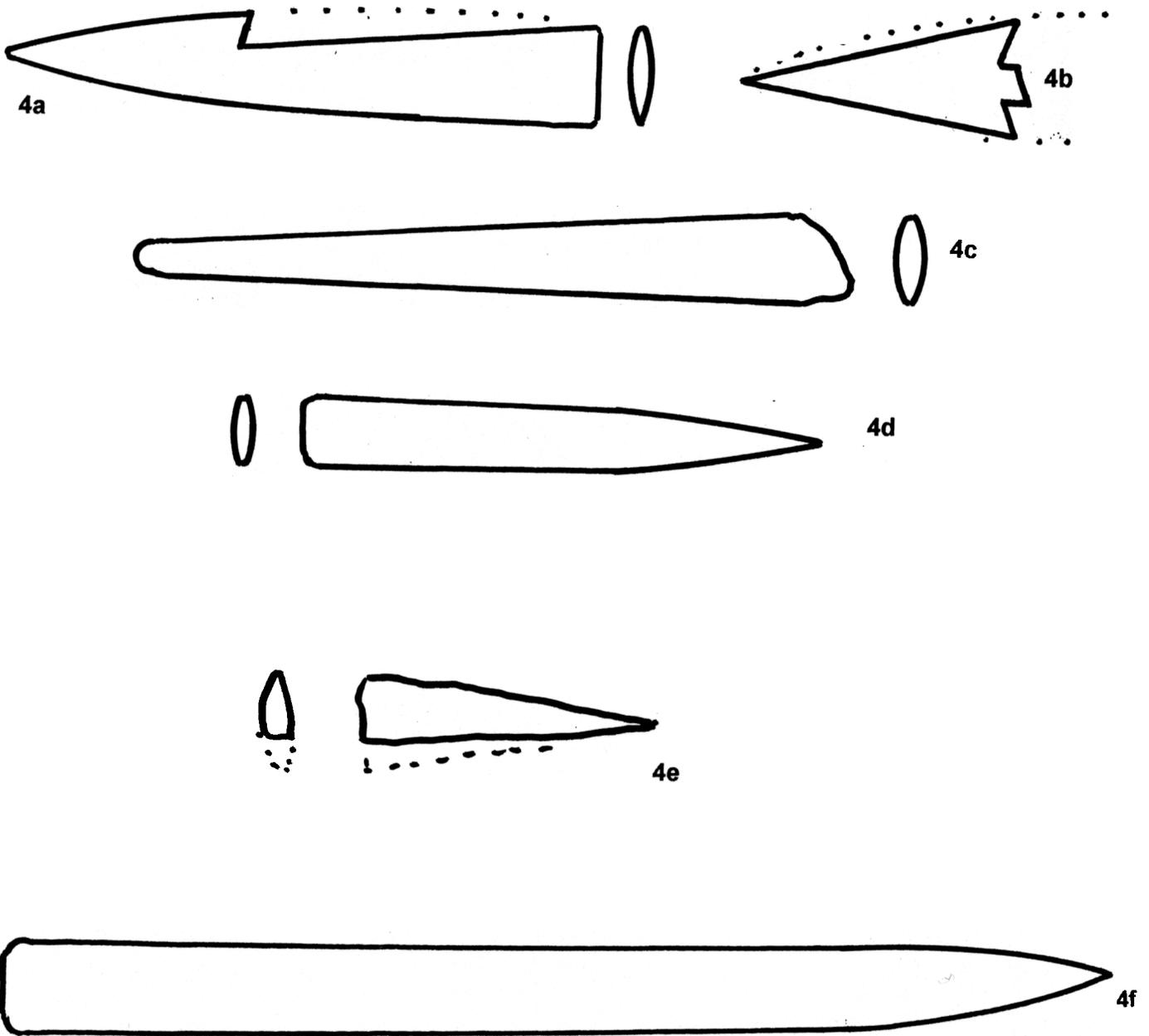


Figure 4: Artifacts made from the pointed tip end of two-edged sword-blades
 4a: Petun Collections RB1: single-barb harpoon (Table 1.4.1).
 4b: Petun Collections HCL 100s0e: barbed and tanged projectile point (Table 1.4.2).
 4c: Petun Collections HL4: point of sword (Table 1.4.3).
 4d: Petun Collections CR8 45n20eA: point of sword (Table 1.4.4).
 4e: Petun Collections McA 28w0sD: point of a sword (Table 1.4.5).
 4f: Royal Ontario Museum 956.4.15: point of sword (Table 1.4.6).

The French words "VIVE LE ROY" are engraved on each side of the blade, each engraving preceded by a six-pointed star and followed by hieroglyphics of unknown meaning. The French words indicate a pre-Dispersal origin for this sword. Emphasis on the authority of the king of France might have been greatest in the earlier rather than later of the French-Petun period (1616-1650) when the first trading company was set up under the King's authority. Champlain journeyed to the Petuns in 1616 under the authority of both the King and the Viceroy of New France, from whom he held the Commission of Lieutenant to the Viceroy. At the time the Viceroy was Henri de Bourbon, the Prince of Condé. Champlain reported to both the King and the Prince (Champlain 1925 II:243-247; 1929 III:15; 1932 IV:217, 220-223, 350). The Company of Merchants, formed in 1614, and which funded the cost of equipping Champlain's expeditions, was beholden to the Prince and the King for its creation and authority (Champlain 1932 IV:220-225). In these circumstances, the inscription "VIVE LE ROY" would be diplomatically and politically correct, perhaps even mandatory. Considering this, it seems to the writer that, while the sword could have been the private property of some unknown trader, either for personal use or for trade, it was more probably issued by the Company of Merchants for a formally sponsored expedition, such as Champlain conducted 1615-1616. It was not unusual to engrave sword blades with texts, makers' names and marks, etc. A blade marked IHS dates to 1610 (Reid 1976:98). Further evidence that the sword dates to pre-1650 is that adapted artifacts found on archaeological sites of the period are made from the same sort of blade.

This sword is presumably the one given to Dr. Stephens by the "farmer who used it to cut thistles" (Jardine 1934:23). It is shown in its entirety in Figure 1 in reduced size. It would appear to be a simple, "cheap", every-day sword, such as might be carried by musketeers (Roberts 2002:10). Its simplicity, the softness of the slightly bent blade, and perhaps the blunt tip, all suggest it was more of a general purpose weapon, but fairly advanced in the line of evolutionary development which eventually resulted in the smallsword of the late 17th Century. In this process "The blade was shortened and lightened, and the hilt design was simplified" (Evangelista 1995:492).

Examples of similar recurved ('S-shaped') quillons appear on swords dated ca. 1600 and 1618-1648, and that the quillons are not straight indicate the sword pre-dates the introduction of new fencing techniques later in the 17th Century (Blair & Tarassuk 1982:260, 402, 403, 470 nos. 3,4,& 5, 472; Evangelista 1995:492-493).

This sword complies with the definition of a "rapier". That it has a guard and evidence of a hilt indicates it was not a blade-only trade item.

1.2 Three chisel/wedge/scrapper artifacts made from the ricasso/upper blade segments of two-edged swords (Figure 2, page 7a)

The 'ricasso' is the strongest part of the sword-blade, at the shoulder (see Illustration 'a', page 2a), blunt and oblong in cross-section, where the blade may be grasped by the fingers without them being cut. It provided strength at the shoulder, and moved the centre of gravity toward the hilt. All three specimens have a part of the hilt tang, the complete blade shoulder, the blunt ricasso area, channels which vary in number and location but extend wholly or partly from the ricasso into the blade, the commencement of the two sharpened edges, and terminate where the fragment was severed from a whole blade and ground to a cutting edge. The tangs of all three have been reduced, and two (Table 1.2.2 and 1.2.3; Figures 2b and 2c, page 7a) particularly show hammering at the ends of the tangs, indicating these artifacts have been used, probably as chisels.

1.2.1 (Figure 2a): Petun collections HL4 (Hamilton-Lougheed BbHa-10 site): curved cutting edge; one channel. Maximum dimensions 16.2 cm. long x maximum 20 mm. wide x 5 mm. thick. This specimen may not have been finished as the tang fragment shows no sign of use or impact.

1.2.2 (Figure 2b): Collingwood Museum X975.935.1 (Marked "Bell" and presumed to be from the Bell BcHb-11 site): chisel edge, one channel. Maximum dimensions 13 cm. long x 24 mm. wide x 8 mm. thick. The tang shows use-impact.

1.2.3 (Figure 2c): Collingwood Museum X975.927.1 (unprovenienced): curved chisel cutting edge, three channels. Maximum dimensions 13.2 cm., x 24 mm. wide x 8 mm. thick. The tang shows use-impact.

1.3 Six artifacts made from blades of two-edged swords (Figure 3, page 7b)

These artifacts are believed to be from two-edged, straight blade "rapiers" because of their symmetrical hexagonal or lenticular/bi-convex cross-section shape, with parallel or nearly-parallel sides. 1.3.1, 1.3.2, 1.3.3 and 1.3.4 may have been scrapers, or were being prepared for some functional use.

- 1.3.1 (Figure 3a): Petun collections HL4 (Hamilton-Lougheed BbHa-10 site): a scraper ? with curved working edge. 10.5 cm. long x maximum 19 mm. wide x 5 mm. thick.
- 1.3.2 (Figure 3b): Petun collections HL5 (Hamilton-Lougheed BbHa-10 site): a scraper ?. Upturned burr at one end. 8 cm. long x maximum 24 mm. wide x 6 mm. thick.
- 1.3.3 (Figure 3c): Petun collections PR19 (Pretty River BcHb-22 site): a scraper ?. 10.7 cm. long x maximum 18 mm. wide x 4 mm. thick, bent into a curve.
- 1.3.4 (Figure 3d): Petun collections CR6 (Connor-Rolling BcHb-3 site): a spatulate blade scraper (cf. Fitzgerald 1992:107-108, 203) with curved bit. 8.3 cm. long overall, 12/16 mm. wide (increasing toward the bit edge) x maximum 4 mm. thick. The degree of taper indicates this item was made from near the tip of a blade, but the narrowest end towards the point is now the handle and the widest the working edge.
- 1.3.5 (Figure 3e): Petun collections PM5 (Plater-Martin BdHb-1 site): an iron fragment 6.3 cm. long x maximum 14 mm. wide x 4/3 mm. thick. While not certainly an artifact, this is included here because it fits precisely over part of 1.3.4. The taper of both width and thickness suggests this piece was close to the point of the blade.
- 1.3.6 (Figure 3f): Collingwood Museum X975.920.1 (unprovenanced): a spear point ? made in reverse to the processes applied to 1.2.1, 1.2.2 and 1.2.3 (Figures 2a, 2b and 2c, page 7a) in that the former blade appears to have become the handle and the thicker and stronger zone that was formerly toward the hilt, lightened by two channels, has become the working point. The cutting edges extend from the plain blade into the channelled area. Maximum dimensions 23.4 cm. long x 21 mm. wide x 4 mm. thick.

1.4 Six artifacts made from the pointed extremities of two-edged sword blades (Figure 4, page 7c).

These artifacts are accepted as derived from two-edged, straight blade "rapiers" because of their symmetry in lenticular cross-section. In the example of 1.4.2 (Figure 4b, page 7c) the original sword tip has seemingly been modified to make the point sharper. 1.4.4. and 1.4.5 (Figures 4d and 4e, page 7c) may have also been modified, as they are more pointed than 1.4.1 (Figure 4a, page 7c) or 1.1 (Figure 1, page 7a). In the example of 1.4.5 (Figure 4e, page 7c) this appears to have been done lopsidedly, destroying the symmetry of the lenticular cross-section. An alternative explanation is that this piece, and therefore perhaps others, are not original points, but blade sections made into points by the Petun. The corrosion on all these pieces prevents any determination of the possibility that these may be original points, subsequently modified original points, or points made by the Petun on blade fragments.

- 1.4.1 (Figure 4a): Petun collections RB1 (Rock Bottom BcHb-20 site): a single-barb harpoon-made by cutting a wedge away from one side of the blade near the tip. Maximum 9.3 cm. long x 16 mm. wide x 4 mm. thick.
- 1.4.2 (Figure 4b): Petun collections HCL 100°0° (Haney-Cook Lower BcHb-27 site): a barbed and tanged projectile point made from a sword-blade tip. Maximum 4.7 cm. long x 20 mm. wide x 3 mm. thick.
- 1.4.3 (Figure 4c): Petun collections HL4 (Hamilton-Lougheed BbHa-10 site): a point of a sword, blunted, 11.4 cm. long x maximum 14 mm. wide x 5 mm. thick.

1.4.4 (Figure 4d): Petun collections CR8 45°20'a (Connor-Rolling BcHb-3 site): a point of a sword, 8.3 cm. long x maximum 12 mm. wide x 5 mm. thick.

1.4.5 (Figure 4e): Petun collections McA28°0'sd (McAllister BcHb-25 site): a point of a sword, 4.6 cm. long x maximum 10 mm. wide x 5 mm. thick.

1.4.6 (Figure 4f): Royal Ontario Museum 956.4.15 (Haney-Cook Lower BcHb-27 site): a point of a sword, 17.6 cm. x 15 mm. maximum width tapering to a point x maximum 5 mm. thick.

<><> end of Table 1 <><>

TABLE 2: Dates Assigned to Petun Area Swords and Derived Artifacts

Petun swords and derived artifacts are presumed to be of the same date as the site on which they were found. Sites mentioned in this text are arranged below in geographical sequence south to north, with the dates (as GBPs, a.d.) currently assigned to them derived from evidence other than swords, except where noted. In the Petun area GBPs are: GBP1 1580-1600; GBP2a 1600-1616; GBP2b 1616-1625/30; GBP3a 1625/30-1604/42; GBP3b 1640/1642-1650).

	GBP
Latimer BbHa-12	1-2a
Melville BbHa-7	2
Hamilton-Lougheed BbHa-10	3a
McBeth BcHa-4 Ossuary	*
Duggan BcHa-11	*
Connor-Rolling BcHb-3	2b-3a
Graham-Ferguson BcHb-7	2b-3a
Glebe BcHb-1	2b-3a
Lamont BcHa-8	*
Bell BcHb-11 site	3a
Young-McQueen BcHb-19	2a
Pretty River BcHb-22	2b-3a
Rock Bottom BcHb-20	2
McAllister BcHb-25	1-2a
MacMurchy BcHb-26	1-2a
Haney-Cook Lower BcHb-27 site	2b-3a
Haney-Cook Upper BcHb-27 site	2b-3a
Plater-Martin BdHb-1	3

* = sites not dated by other means, now shown to be GBP2 or later by the swords.

<><> end of Table 2 <><>

Conclusions:

- (1) No entire or partial swords, or artifacts derived from swords, occur on Petun sites during GBP1.
- (2) Whole blades have been reported on GBP2 Petun sites, especially in ossuaries, and artifacts derived from sword-blades occur in GBP2 and early GBP3 (GBP2b-GBP3a).
- (3) Whole swords were not used in hunting as described by Champlain, Sagard and Denys. Sword-blades were broken or cut into fairly uniform lengths, presumably to obtain more points from one sword, and at the same time to provide material for other artifacts such as chisels, wedges and scrapers.
- (4) Swords, being individually hand-made, varied in all dimensions and other characteristics.
- (5) All Petun area iron artifacts confidentially interpreted as derived from swords are made from straight two-edged blades ("rapiers"), the symmetry of which favoured adaptation into points, harpoons

and other artifacts.

- (6) Sword-hilts are rare because they were not trade items. Only one is certainly known from Ste. Marie I, and only one hilted sword is known from the Petun area, although unprovenienced. This was possibly the former personal property of a Frenchman who visited the area.
- (7) Because sword-blades were usually cut up and recycled by the Indians into forms and uses with which they were familiar, they are probably not recognised in the Ontario archaeological record to an extent corresponding to the numbers that were imported.
- (8) The following are lacking and need to be determined for GBP2-3:
 8.1 if swords were made expressly for the trade in Ontario;
 8.2 if swords declined in dimensions and weight over time (as did iron axes);
 8.3 A simple method of distinguishing 19-20 century iron from GBP2-3 French-imported iron.

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