THE GALLAGHER FLINT STATION: A MUCH-OVERLOOKED ANCIENT RECORD OF HUMAN OCCUPATION IN ARCTIC ALASKA

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ABSTRACT

The Gallagher Flint Station was discovered along the northern front of the Brooks Range during an archaeological survey of the Trans-Alaska Pipeline System right-of-way. Excavation there in 1970–1971 uncovered a core and blade assemblage said to date to the Late Pleistocene. At that time, few sites in Alaska approached or exceeded 10,000 radiocarbon years in age, and thus the Gallagher Flint Station aroused considerable interest. Subsequent excavation in 1974 revealed a much broader cultural milieu and temporal span. Little has been written about that aspect of the site, however, and much of what has been written is not readily accessible. This paper is not an analysis of the unreported data but an introduction to the site and an overview of the material cultural found there, which includes the full gamut of Paleoeskimo cultures, a substantial Northern Archaic tradition component, and a previously unrecognized Northern Paleoindian tradition presence. In addition, new radiocarbon dates were obtained for two of the site localities.

INTRODUCTION

It has been over 50 years since the Gallagher Flint Station was first reported, but this large and culturally complex site remains poorly known. The only readily accessible publication (Dixon 1975) is less than 10 pages long and deals almost exclusively with the core and blade component of Locality I said to date to the Late Pleistocene. Other less accessible studies include reports of the discovery and initial work by Dixon (1970, 1971) and a 1972 master's thesis by the same author, again focusing almost exclusively on Locality I. Dixon (1976a, 1976b) also gave two papers on the early aspect of the site at international conferences. A 1976 progress report by the late John Cook, then the head of the University of Alaska's Trans-Alaska Pipeline System (TAPS) Archaeology Project, found in what can only be described as the grayest of gray literature, provides a brief site overview. A more detailed, but still far from comprehensive, overview is given in a 1983 Bureau of Land Management assessment of the physical integrity of the site (Bowers 1983), by then a National Historic Landmark. The Bowers report is noteworthy in that it is the only paper that discusses all of the excavated areas of the site and acknowledges its cultural complexity. Lastly, a master's thesis by Daryl E. Ferguson (1997a) and a published synopsis of that work (1997b) record a thoughtful reinvestigation of Locality I that included limited excavation as well as a detailed examination of the previously excavated material and associated records.

The focus on Locality I is understandable when the site is viewed in historical context. In 1970, few known sites in Alaska approached the terminal Pleistocene in age, and thus the site's oldest component was of great interest and frequently alluded to in the literature (e.g., Anderson 1984; Dixon 1999; Dumond 1987; Hamilton and Goebel 2005). Astonishingly, a half century later, Locality I still remains the only thoroughly studied portion of the site even though it comprises less than 8% of the excavated area. Despite the notoriety of Locality I, few researchers are aware that the site was used by all the known prehistoric cultures of interior Arctic Alaska. This paper is neither a site report nor a critique of past work at Gallagher. It is merely an attempt to introduce the reader to the site, its cultural complexity, and its substantial research potential. It is an amalgamation of memories of brief site visits made during work at the site 50 years ago, perusal of the scant site literature, and a cursory examination of the extensive Gallagher collections at the University of Alaska Museum of the North. We hope the paper will serve as a prologue to further work with the Gallagher collections and with the site itself.

THE GALLAGHER FLINT STATION

The Gallagher Flint Station (PSM-050) lies in the Sagavanirktok River valley at the northern extent of the Brooks Range, roughly midway between the Arctic Circle and the Beaufort Sea (Fig. 1). The site occupies a glacial kame roughly 180 m in diameter with an irregular surface rising to 24 m above the surrounding terrain (Fig. 2). The kame, the largest member of an extensive north-south-oriented kame field, provides an uninterrupted view in all directions (Fig. 3), except to the northwest where Slope Mountain rises abruptly from the valley floor less than 2.5 km away. The kame field contained many sites, as can be seen in Figure 1, and all the kames examined there contained archaeological sites, but none of them rivaled Gallagher in area or quantity of cultural material.

The site was named after a field assistant at the time of the discovery, Charles H. Gallagher. Excavation there was directed by Dixon in 1970, 1971, and 1974. The 1970–1971 work was performed by three to four people and limited to Localities I, IA, and II (Fig. 4). The much more extensive 1974 excavation, conducted at the height of pipeline construction, employed as many as 20 people and was urgently conducted because the southern half of the kame had been selected as a gravel source for road construction (Cook 1976:109). The gravel mining never occurred, but the threat of it focused work on that portion of the kame, leaving the remainder largely unexcavated. By the completion of the 1974 field season, the excavated area had increased by over sevenfold. More recently, Daryl

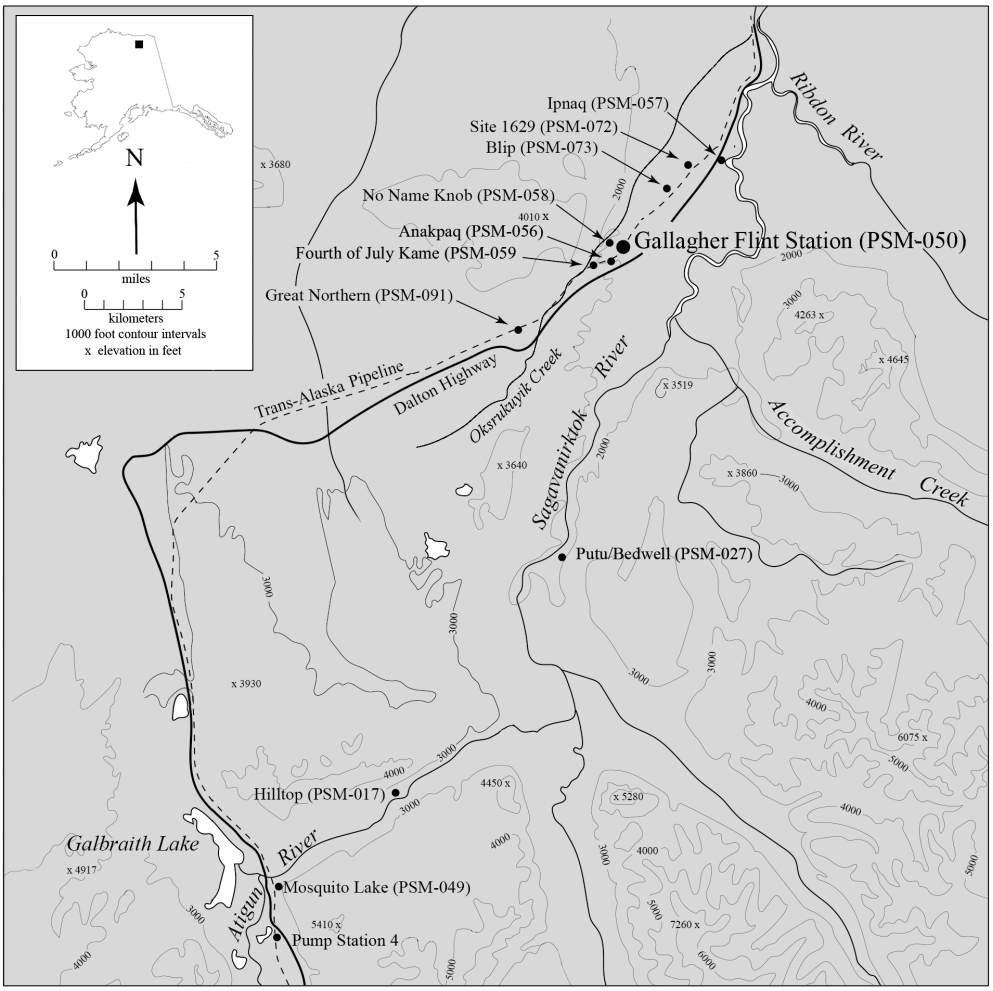

Figure 1. Gallagher Flint Station and selected nearby sites.

Figure 2. Aerial view of the site, probably taken early in the 1974 field season, view to the southwest. Author's collection, E. James Dixon photograph.

Figure 3. Work at Gallagher during the 1974 field season. Note the expansive view to the south. Glen Bacon at right, E. James Dixon at center facing camera, other excavators unknown. Author's collection, photographer unknown.

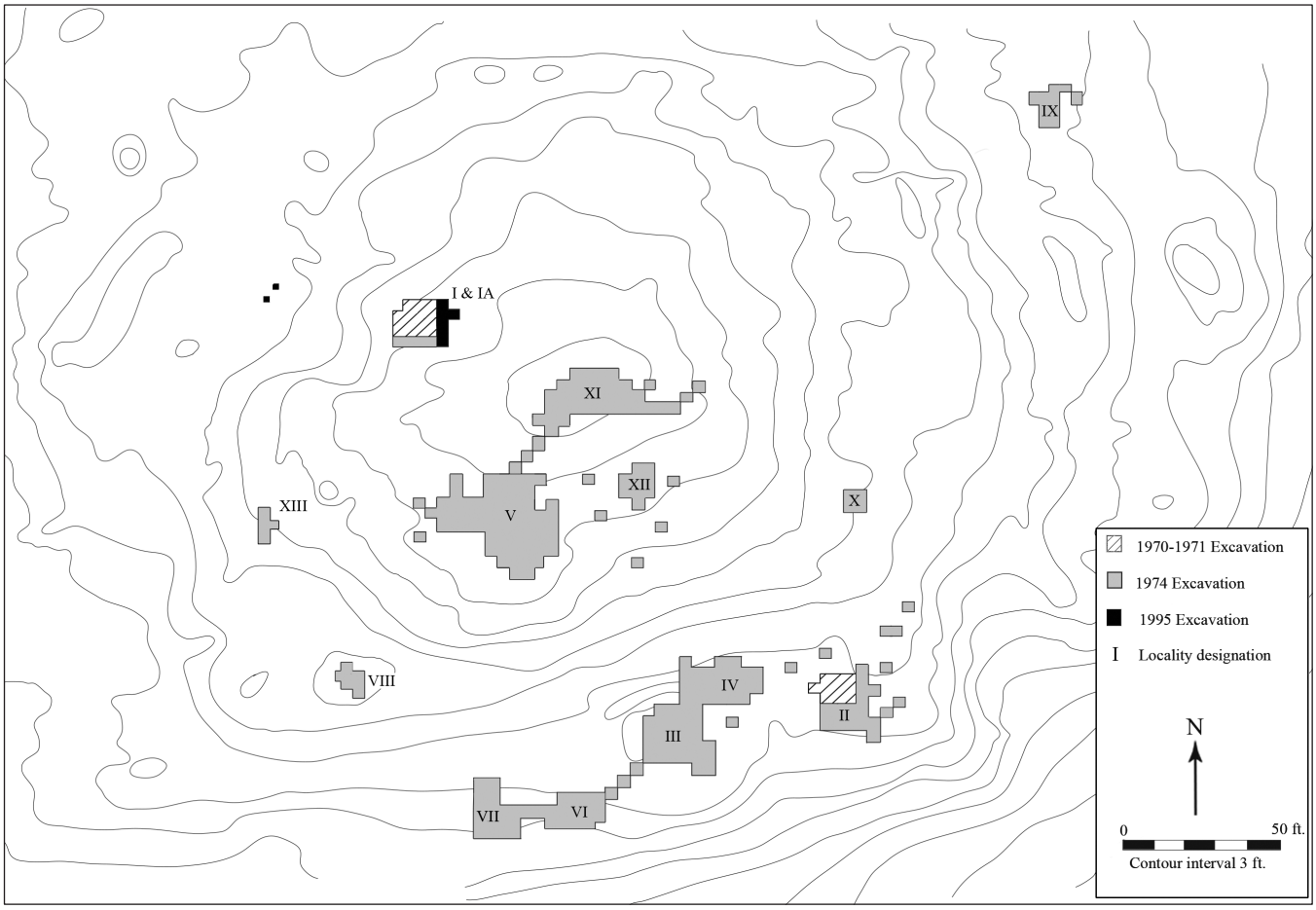

Figure 4. Site map showing excavated localities and dates of excavation. Note that the northern portion of the site is largely unexcavated. Redrawn from Bowers (1983:fig. 1), original map by Eric E. Dixon.

E. Ferguson (1997a, 1997b) conducted a small-scale excavation at the site in 1995 primarily to obtain datable material in an attempt to verify the Late Pleistocene age of Locality I.

The sparse site stratigraphy consists of three or four units, depending on the source consulted. Level 1 is a thin dark brown to black organic soil not exceeding 9 cm in depth. Level 2 is a medium brown loess extending to 30 cm below the surface according to Dixon (1972:13), whereas Ferguson (1997a:10) reports the gradual appearance of gray loess and a change in soil texture about midway through the level. Level 3 is unsorted glacial till. Erosion and cryoturbation have resulted in surface exposures of till, and till lenses occur in the upper two levels. Cultural material was found on the surface and in Levels 1 and 2. The 13 excavated areas of the site, termed localities by the excavator, were laid out in four-by-four-foot squares, and English units will be retained here when describing excavation units.

The artifact collection, field notes, and other site records are curated at the University of Alaska's Museum of the North. Unfortunately, there are some discrepancies among the data sets and between them and the meager site literature. Confusion even surrounds the extent of excavation. Bowers (1983:table 1) places the excavated area at 14,543 ft^2, an overstatement of almost 9,000 ft^2 caused by misreading Cook's (1976:115–116) progress report. In that report, Cook states that Locality V contained 10,500 ft^2, the figure used by Bowers, but further states that only 1,696 ft^2 (106 four-foot squares) of that area were actually excavated. Bowers's (1983:table 1) summation also includes Locality IA (56 ft^2), which is entirely within Locality I (Dixon 1971:177) and thus does not increase the extent of excavation. These corrections reduce the excavated area to 4234 ft^2 (Table 1). Additionally, Bowers (1983:table 1) indicates that 723 one-foot-square test pits were excavated but elsewhere (1983:7) states that the tests ranged in size "from 25 cm x 25 cm to full meter squares." Further, only 280 test units are shown on the site map accompanying the report (Bowers 1983:fig. 2). Because of these uncertainties, we excluded test pits from our calculations.

Table 1. Excavated areas, dates of excavation, and radiocarbon dates of Gallagher Flint Station localities.

Loc. #	Area (ft²)	Dates excavated	RCYBP	Lab. #	Calibrated date[1] (2σ)	Source
I	4234	1970–1971,	10,540 ± 150	SI-974	11,947–12,723 cal BP	Dixon 1975:69
		1974, 1995	6960 ± 902	Beta-97211	7657–7960 cal BP	Ferguson 1997a:66
			2220 ± 50	Beta-88031	2096–2338 cal BP	Ferguson 1997a:65
IA	0		2620 ± 175	SI-975	2310–3172 cal BP	Dixon 1975:69
II	336	1970–1971,	1660 ± 140	GX-4253	1298–1835 cal BP	Cook 1977:65
		1974	2125 ± 703	SI-972	1933–2315 cal BP	Dixon 1972:12
			2920 ± 155	SI-972a	2755–3401 cal BP	Dixon 1972:12
			905 ± 5033	SI-973	704–922 cal BP	Dixon 1972:12
			3280 ± 155	SI-973a	3134–3903 cal BP	Dixon 1973:12
III	464	1974	n/a	n/a	n/a	n/a
IV	464	1974	1330 ± 150	GX-4253	955–1524 cal BP	Cook 1977:65
			1665 ± 165	GX-4254	1281–1942 cal BP	Cook 1977:65
V	880	1974	2135 ± 135	GX-4255	1736–2375 cal BP	Cook 1977:65
			1975 ± 125	GX-4256	1688–2180 cal BP	Cook 1977:65
			2540 ± 185	GX-4257	2146–3068 cal BP	Cook 1977:65
			1100 ±160	GX-4258	724–1299 cal BP	Cook 1977:65
VI	224	1974	n/a	n/a	n/a	n/a
VII	304	1974	1735 ± 150	GX-4259	1345–1947 cal BP	Cook 1977:65
			2640 ± 180	GX-4260	2320–3214 cal BP	Cook 1977:65
			2365 ± 170	GX-4261	1989–2778 cal BP	Cook 1977:65
VIII	80	1974	1840 ± 170	GX-4262	1411–2065 cal BP	Cook 1977:65
IX	272	1974	970 ± 160	GX-4263	650–1178 cal BP	Cook 1977:65
			2665 ± 180	GX-4264	2338–3229 cal BP	Cook 1977:65
X	64	1974	1780 ± 150	GX-4365	1353–2003 cal BP	Cook 1977:65
XI	592	1974	n/a	n/a		n/a
XII	144	1974	n/a	n/a		n/a
XIII	80	1974	n/a	n/a		n/a
Total	**4224**					

1. Calibrated with Calib 8.1 using IntCal20 (Stuiver and Reimer 1993).
2. Date on charcoal archived from a 1970 test unit located 15 m north of Locality I containing artifacts "technologically identical" to those from Locality I (Ferguson 1997a:66).
3. Assays SI-972 and SI-973 were performed prior to root removal considered unacceptable by the excavator (Dixon 1975:69). Assays on additional fractions of the same samples (SI-972a and 973a) following root removal produced acceptable dates.

There are also specimens missing from the Gallagher collection. Ferguson (1997a:81*n*3) reports that roughly 100 pieces are missing from the Locality 1 assemblage, and we were unable to locate most of the diagnostic artifacts from Locality II. Similarly, a previously unidentified Paleoindian projectile point from Locality VII, recognized from a field sketch, is also missing; a note on the envelope formerly holding the specimen indicates it was observed missing in 1980. Several other cataloged projectile points from this locality are also missing. We did not attempt to systematically compare accession records to the extant Gallagher collection, so the number of missing specimens may be greater, perhaps far greater, than we observed. Regarding the missing artifacts, it is perhaps significant that the Gallagher material and other TAPS archaeological collections were stored at the Department of Anthropology and Institute of Arctic Biology at the University of Alaska Fairbanks for several years before being transferred to the more secure University Museum, now the Museum of the North.

CULTURAL TAXONOMY AND CHRONOLOGY

Before discussing the Gallagher assemblages, a discussion of cultural taxonomy and dating are in order. The majority of the Gallagher collection consists of material originating from the Denbigh Flint Complex (hereafter Denbigh), Choris, Norton, and Ipiutak cultures. These cultures are commonly, and in our view inappropriately, referred to collectively as components of the Arctic Small Tool Tradition (ASTt), and that term is not used here.[2] Instead of ASTt, we prefer the term Paleoeskimo cultures, without necessarily implying genetic continuity among the people behind the artifacts. The well-defined and readily identifiable Denbigh (Giddings 1964), Norton (Giddings 1964), and Ipiutak (Larsen and Rainey 1948) cultures need no introductory

remarks, but this is not the case with the Choris culture, which is neither well defined nor readily identifiable. It should be noted, however, that Norton and Ipiutak assemblages share a number of lithic attributes, rendering it difficult at times to distinguish one from the other. This is particularly so with small assemblages and with those lacking organics (Larsen 1982), such as the Gallagher assemblages. Nevertheless, singly or collectively, they differ from Choris in the lack of large, parallel-obliquely flaked projectile points, flaked burins of any kind, and the extensive use of sideblades among other characteristics.

We have followed the lead of Darwent and Darwent (2016:373) in confining our search for Choris diagnostics to the type site on Choris Peninsula, the Choris Campsites at Cape Krusenstern (Beaches 44–52), and the Choris levels (Bands 2/3 and 3) at Onion Portage on the Kobuk River. We do not suggest, however, as Darwent and Darwent do, that the sites are unequivocally Choris, since that poorly understood culture has been described as puzzling (Anderson 1968:69), obscure and enigmatic (Bowers 1982:100)—even Darwent and Darwent (2016:371) note that Choris is enigmatic—and one author (Clark 1976:30) has even suggested that the inland and maritime manifestations of Choris may be unrelated.

A hallmark of Choris culture is well-made cord-marked and linear-stamped pottery, the earliest ceramics in the North American Arctic. The use of pottery distinguishes Choris from Denbigh and earlier cultures and, curiously, from the distantly subsequent Ipiutak culture, but not from the immediately subsequent Norton culture with which Choris shares linear-stamped pottery among other traits. Check-stamped ceramics, an important Norton attribute, are apparently lacking in Choris. Check-stamped and cord-marked sherds do co-occur on Beach Ridge 44 at Cape Krusenstern, but that area was inhabited by both Choris and Norton people (Giddings and Anderson 1986:209, 211). Cord-marked pottery may be exclusively associated with Choris in northern Alaska, but there is conflicting or ambiguous evidence. A single possibly cord-marked sherd was found in Burial 103 at Ipiutak, a burial of uncertain cultural affiliation containing a stone lamp and a diagonally flaked projectile point much thicker than Ipiutak forms (Larsen and Rainey 1948:164). Four similar sherds were found in Burials 96, 98, and 102. The former two are shallow Ipiutak burials, and the sherds are thought to be intrusive. Burial 102, on the other hand, is said to be "atypical," i.e., unlike Ipiutak or Near Ipiutak burials (Larsen and Rainey 1948:164). Additional cord- or thong-marked ceramics were found in middens at the site, middens said to be deposited by a group "closely related to the Ipiutak people" (Larsen and Rainey 1948:167). Giddings (1964:178) reports two check-stamped sherds and another with "some kind of textile impressions . . . probably that of a cord-wrapped paddle" from Madjujuinuk, a site on Cape Denbigh just south of Iyatayet. The site was only briefly tested and, perhaps significantly, Giddings noted that "*nearly* all of the artifacts" (italics supplied) obtained were similar to those of the Norton levels at Iyatayet (Giddings 1964:178). Far to the south and far from Choris territory as now conceived the situation is different; cord-marked pottery occurs in apparent Norton context at Nanvak Bay (Larsen 1950:183), at Chagvan Bay (Ross 1971), and on the Alaska Peninsula at Brooks River (Dumond 1981:213). Curiously, cord-marked, linear-impressed, diamond-stamped, and check-stamped sherds were found in and around a single house at Chagvan Bay (Ackerman 1988:170).

Turning to lithic artifacts—and that is all, apart from a few pot sherds, that Gallagher offers—we heartily agree with Darwent and Darwent (2016:377) that it is easier to determine what is not associated with Choris than what is associated. Table 2 shows the association of diagnostic artifacts from the Gallagher assemblages with Paleoeskimo cultures. Starting with the easy part, microblade cores and the microblades struck from them, mitten-shaped burins, and bi-pointed projectile points, all hallmarks of Denbigh, do not occur in Choris. Similarly, ground burins or burin-like implements, common in other Paleoeskimo assemblages, are absent from Choris. Anderson and Giddings (1986:314) maintains that mitten-shaped burins and microblades coexist with ceramics and other Choris attributes at several sites, including Gallagher, which he sees as a transitional Denbigh-Choris phase. On the other hand, Dumond (2000) sees, as we do, little evidence of such a transitional culture. In the thin soils at Gallagher, for example, the co-occurrence of Denbigh and Choris artifacts is more likely the result of mixing due to the repeated use of a relatively small area. Choris does, nonetheless, share the use of parallel-oblique flaking with Denbigh, but Choris flake scars are broader and the technique is mostly applied to larger artifacts, particularly lance points. The tiny, artfully flaked projectile points and sideblades common in Denbigh are not found in Choris. The use of parallel-oblique flaking diminishes substantially, but does not entirely disappear, in the following Norton and Ipiutak cultures.

Table 2. Occurrence of selected diagnostic artifacts among Alaska Paleoeskimo cultures.

Artifact	Denbigh	Choris	Norton	Ipiutak
Flaked projectile points	+	+	+	+
Bipointed	+			
Pentagonal			+	
Strongly stemmed		+	+	
Large, oblanceolate, obliquely flaked		+		
Sideblades for arrowheads	+	+a	+	+
Burins	+	+		
Mitten-shaped burins	+			
Flake-burins		+		
On biface or flake-knife		+		
Large, thick burin spalls		+		
Microblade technology	+			
Unground adz blades		+		
Shaft smoothers	+	+	+	+
Ceramic technology		+	+	
Cord-Marked		+		
Linear-stamped		+	+	
Plain		+	+	

a. Uncommon in Choris assemblages

Choris artifacts are commonly distinguished from other Paleoeskimo implements by degree or nuance rather than by type, and this is particularly so regarding projectile points. There are also inconsistencies within Choris assemblages from different sites. Choris points from the type site tend to have edge-ground bases, unlike many Norton and Ipiutak forms, but 46 of the 53 weapon points (86%) from the Choris Cache at Cape Krusenstern are unground (Giddings and Anderson 1986:215). The points tend to have straight bases, but mildly concave and inverted V-shaped bases also occur (Giddings and Anderson 1986:198, plate 112). In addition to the above, the Choris levels at Onion Portage produced stemmed points and oblanceolate forms with high shoulders, types also found in Norton collections. Unlike the type site, edge grinding was limited to stemmed forms and those with inverted V-shaped bases at Onion Portage (Anderson 1988:104–105). Curiously, edge grinding on Norton points at Iyatayet is confined to stemmed types, about half (46%) of which are so treated (Giddings 1964:161–164).

Sideblades, common in other Paleoeskimo assemblages, were entirely lacking at the Choris type site according to Giddings (1957:132), even though an asymmetrically shaped serrated "projectile point" he illustrates (1957:fig. 9.1) looks suspiciously like a sideblade. Anderson (Giddings and Anderson 1986:198) indicates a single Denbigh-type sideblade was found at the site, but notes that it may have been introduced from elsewhere by a site inhabitant. At Onion Portage, only two complete sideblades and eight fragments were recovered (Anderson 1988:104). Sideblades also occur on the Choris beaches at Cape Krusenstern, but not in the frequencies encountered in other Paleoeskimo cultures. In fact, the sites used here to determine diagnostic Choris artifacts—the Choris type site, Cape Krusenstern Beaches 44–52, and Onion Portage Bands 2/3 and 3—collectively contained only 24 whole and

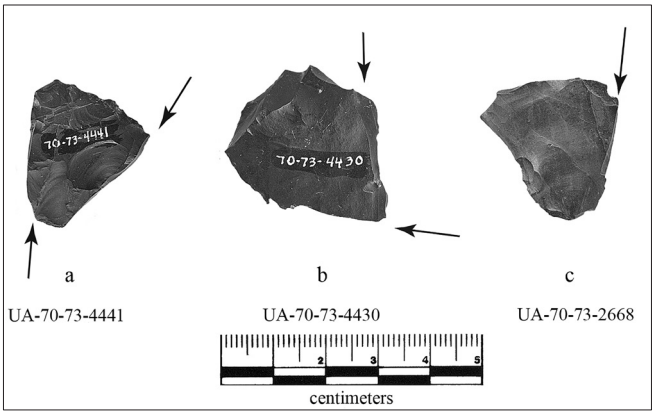

Figure 5. Choris burins: (a) burin on a biface, Locality VII; (b) flake Burin, Locality VII; (c) notched flake burin (Locality IV).

fragmentary sideblades, and one-third (8) of these came from the Choris Cache on Beach 46 at Cape Krusenstern (Giddings and Anderson 1986:216).

Burins seem to be the only lithic artifacts that clearly distinguish Choris from Denbigh, which has quite different forms, and from Norton and Ipiutak, which lack flaked burins entirely. Two types of burins are of interest here: one is commonly made on bifaces (Fig. 5a) and other implements, especially broken projectile points; the other is made on thick relatively unmodified flakes (Fig. 5b), some but not all of which have been notched to facilitate burination (Fig. 5c). The notched forms, termed "burin spall cores" by Anderson (1988:109–110; Giddings and Anderson 1986:214), are believed to have functioned to produce burin spalls for use in other implements rather than as burins. The term "burin spall core" should be used with reservations, however, if at all. In addition to being an etymological monstrosity, the term implies that the so-named implements functioned solely to produce burin spalls. If this is so, it is difficult to explain why more burin spall cores than burin spalls are found at some Choris sites. In light of this, we will use the term "flake-burin"[3] to designate the above burin spall cores as well as flakes that have received one or more burin blows but have not been notched or otherwise prepared for burination. Judging from the Gallagher assemblages, Choris burin spalls tend to be wider and thicker than Denbigh burin spalls.

Flake-burins are also found in Paleoarctic context (Akmak) at Onion Portage (Anderson 1970:fig. 41–42) and in somewhat uncertain but probably Paleoarctic contexts at Tunalik (Gal 1982:68, 71), WAI-107 (Gerlach 1982:fig. 14:d–e), and in sites of the Denali Complex (West 1967) in interior Alaska. Nevertheless, we consider flake-burins along with burins on broken bifaces found in mid-Holocene assemblages diagnostic of Choris culture, although they may rarely occur in Denbigh assemblages. Anderson and Giddings (1986:290) report Denbigh burins made on unprepared flakes from Cape Krusenstern, but only two of the 70 burins described (Giddings and Anderson 1986:280, plate 161:ee, 286, plate 166:gg) were apparently made on unmodified flakes. It's worth noting that a number of specimens are in diagnostic limbo because they were only described as burins, chert burins, or burin fragments without further comment. Likewise, among the 105 intact burins recovered at Punyik Point, a major inland Denbigh site, Irving (1964:208–220) reports that only two were made on unmodified flakes, and one of those came from an "Intermediate Complex," Irving's term for material postdating Denbigh but predating late prehistoric Eskimos. As an aside, it seems significant that cord-marked ceramics were found in another of the several Intermediate Complexes at Punyik Point (Irving 1964:269), suggesting a possible Choris presence. Thus, it seems that *if* flake-burins do occur in Denbigh sites, they do so rarely and are absent from most sites, including the type site. Ironically, the only notched Denbigh burin reported appears to be a mitten-shaped burin (Giddings and Anderson 1986:282, pl. 163:oo).

Burins on bifaces and other implements among Paleoeskimo cultures also seem to be largely confined to Choris. Anderson and Giddings (1986:277) notes that the single burinated projectile point from Cape Krusenstern is the only such artifact from the Denbigh deposits there. Similarly, a single burinated biface at Onion Portage was the only artifact of that type among 100 chipped stone burins from the Denbigh levels. Furthermore, the specimen was found immediately below the Choris levels (Anderson 1988:97), suggesting that it originated there. Other burinated implements are occasionally found in Denbigh assemblages. Tremayne (2015:11, fig. 6n–p), for instance, discusses burinated scraper fragments from a Denbigh site at Matcharak Lake in the upper Noatak River drainage, though he considers it possible that the pieces were made from broken mitten-shaped burins.

The chronological framework we employ (Table 3) is from the introduction to *The Oxford Handbook of the Prehistoric Arctic* (Friesen and Mason 2016:13–14) with some modification. We use this rather generic chronology

Table 3. Chronological framework.

Tradition/culture	Date cal BP	Source
Beringian/Paleoindian	14,000–8000	Friesen and Mason 2016:13
Northern Archaic	6000–4000	Friesen and Mason 2016:13
Paleoeskimo	5200–1200	Friesen and Mason 2016:13
Denbigh Flint Complex	5200–2800	Friesen and Mason 2016:13
Choris	2800–2500	Friesen and Mason 2016:13
Norton	2500–2000	Dumond 2016:401
Ipiutak	1650–1200	Friesen and Mason 2016:13
Neoeskimo	1000–present	Friesen and Mason 2016:14

because it represents relatively recent thought on an ever-changing subject, not because there is a consensus among archaeologists on the dates given. In fact, their framework conflicts with Denbigh dates given in the same volume where Tremayne and Rasic (2016:353), using only "reliable" dates from "clearly understood context," date Denbigh to 4000–3300 BP. Reliability among other criteria in their view requires AMS dates derived from short-lived plants or terrestrial animal bone. We believe this requirement is too exclusive since more Denbigh sites are dated by conventional dates than by AMS dates, and the larger sample size of the former should provide a better estimate of the Denbigh temporal span. The Norton dates in Table 3 deviate from those given by Friesen and Mason because Norton people abandoned northern Alaska about the beginning of the Christian era (Dumond 2016:401; Giddings and Anderson 1986:292), even though they thrived from Norton Sound southward for another half millennia or so.

THE LOCALITIES

Excavation units at the site were termed localities, a spacial unit defined by the presence of cultural material without regard to cultural affiliation; thus, a single locality could contain several cultural components. By the close of the 1974 field season, 10 localities had been excavated at Gallagher; John Cook later created three more localities (XI–XIII) in the laboratory (Bowers 1983:2*n*1). Locality sizes, dates of excavation, and the radiocarbon dates obtained are given in Table 1. The relatively lengthy descriptions of the inventories from Localities I/IA and II are based on Dixon's (1971, 1972) analyses. Unfortunately, these are the only localities that have been analyzed. The more abbreviated accounts of the remaining localities are based on cursory examinations of the Gallagher assemblages conducted by the authors largely to identify diagnostic artifacts.

LOCALITY I/IA

Work began here in 1970 and continued in 1971 and 1974, resulting in 240 ft^2 of excavation (Dixon 1971, 1975). In 1995, Daryl Ferguson (1997a) excavated five additional four-foot squares, increasing the excavated area to 320 ft^2. Locality I initially produced 120 generalized cores (Fig. 6a) and core fragments and over 1000 blades, all of mudstone (Dixon 1972:34, 51). No bifaces, burins, or other formal tools were recovered except for a single biface at first thought part of the core and blade component (Dixon 1971:199) but later, and probably correctly, considered intrusive (Dixon 1972:57). Charcoal said to be "in direct association" with the core and blade assemblage dated to 10,540 ± 150 RCYBP (Dixon 1975:69). Ferguson (1997a:66–67) challenged the assertion, questioning the association of the Late Pleistocene date with the artifacts, and obtained an AMS date of 6,960 ± 90 RCYBP on charcoal archived from the 1970 excavation he claims to be directly associated with "over 600 mudstone artifacts technologically identical to the core-and-blade assemblage of Locality I." The status of the Locality I material will be further discussed below.

As work progressed at Locality I, three projectile point fragments and a complete hand drill, all of chert, were encountered above the mudstone tool level in the northeastern portion of the locality (Dixon 1971:177). That area, comprising 56 ft^2, was designated Locality IA even though it is entirely within Locality I. We were unable to locate these specimens, but they were previously examined by Dixon (1971:177–178) and Ferguson (1997a:fig. 2.9, 51–54). One of the projectile point fragments with delicate parallel-oblique flaking is presumably of Denbigh origin. The other two fragments conjoin but fail to form a complete projectile point. Curiously, Ferguson (1997a:52–53) speculates that the conjoined specimen was a Denbigh projectile point that had been reworked after breakage by a Choris craftsman, suggesting a Choris presence, as does the 2620 ± 175 RCYBP date from there. Ferguson (1997a:65) obtained a date of 2,220 ± 50 RCYBP unassociated with artifacts from the northeast quadrant of Locality I, an area presumably adjacent to Locality IA.

LOCALITY II

As noted above, apart from Locality I, this is the only other Gallagher locality addressed in the literature, where it was initially described as a mixture of proto-Denbigh and Norton elements (Dixon 1971:199) and later as a Choris/pre-Dorset admixture (Dixon 1972:88). Subsequent researchers have viewed the assemblage as largely Choris (Dumond 2000:11) or as evidence of a Denbigh-Choris transitional phase (Giddings and Anderson 1986:314). As previously noted, most of the diagnostic artifacts from this locality are missing from the museum collection. Fortunately, Dixon (1971:179–200,

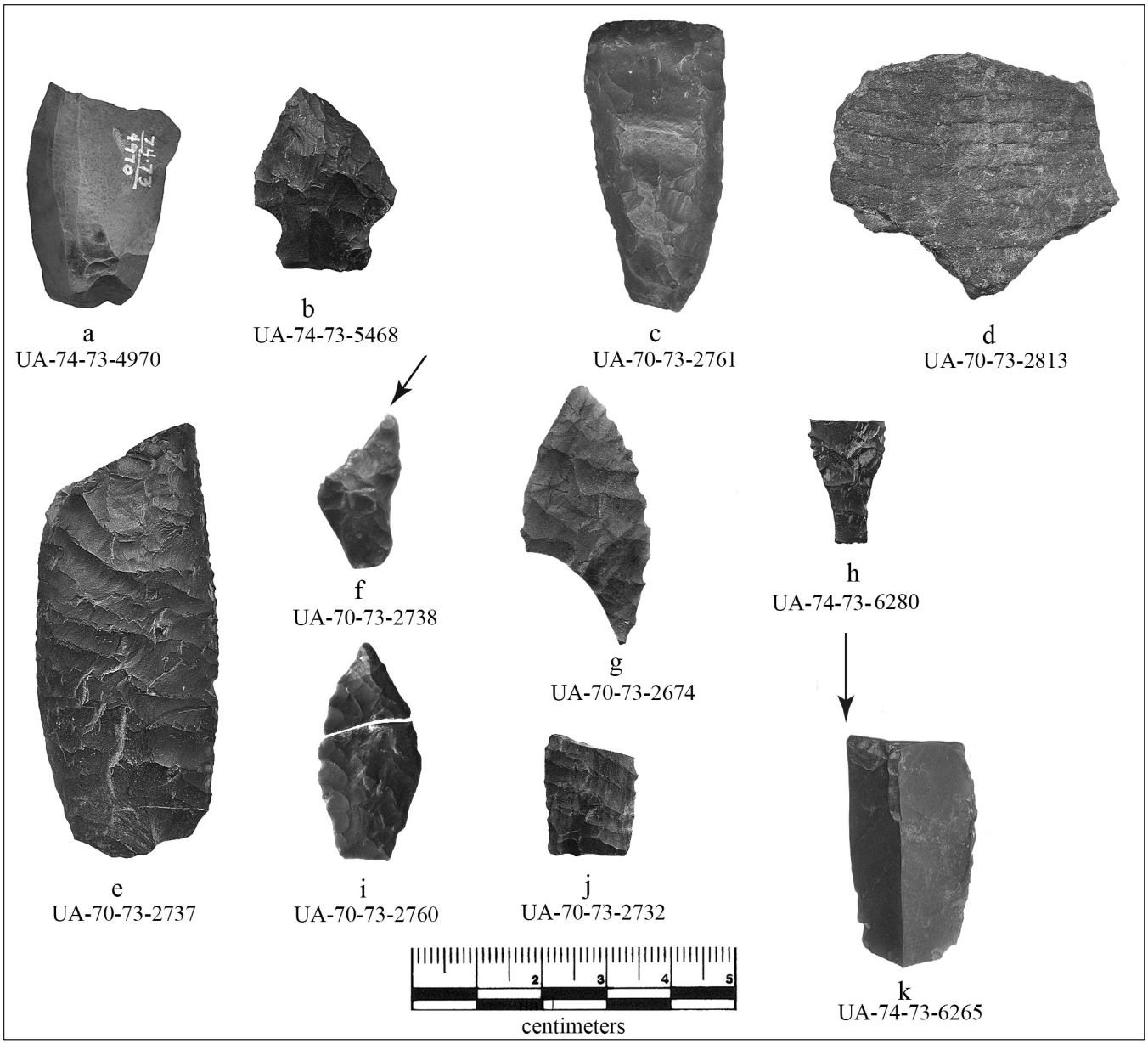

Figure 6. Artifacts from Localities I–V and VII: (a) blade core, Locality I; (b) notched point, Locality III; (c) flaked adz blade, Locality IV; (d) linear-stamped pot sherd, Locality IV; (e) double-edged side scraper, Locality IV; (f) Denbigh burin, Locality IV; (g) projectile point fragment, Locality IV; (h) projectile point base, Locality V; (i) projectile point from two conjoined fragments, Locality IV; (j) projectile point base, Locality IV; (k) burinated blade, Locality V.

1972:66–88) described the material, and his work is followed here. The assemblage is dominated by flake-burins (*n* = 23), 15 of which were notched, and burin spalls (*n* = 17), which collectively account for almost 60% of the identifiable artifacts indicating a strong Choris presence.

The assemblage is mixed, however. Dixon (1971:plate b-5) illustrates a beautifully made unifacial knife, no doubt of Denbigh manufacture as is at least one of the two sideblades from the locality, a small specimen with delicate parallel-oblique flaking. The 11 projectile point fragments are from a mixed assemblage. The points are illustrated by Dixon (1971:plate b-9), but the details of some are obscured by poor image quality. Dixon (1972:84) notes the presence of parallel-oblique flaking, which could indicate Choris or Denbigh affiliation. One small, gracile point fragment (Dixon 1971:plate b-9:c) exhibiting parallel-oblique flaking is almost certainly of Denbigh origin, as are probably several other specimens. Two relatively large stemmed point fragments (plate b-9:l–m) would not appear out of place in a Choris or Norton collection, and the larg-

est specimen illustrated (plate b-9:c) resembles the Choris shouldered spear point from Onion Portage illustrated by Anderson (1988:fig. 104), although the stem is missing on the Gallagher specimen. Dixon (1975:69) obtained four radiocarbon dates from Locality II, but two (SI-972 and SI-973) were improperly pretreated and produced anomalously young dates. Following adequate pretreatment, additional portions of those samples (SI-972A and SI-973A) dated to 3289 ± 155 and 2920 ± 155 RCYBP, respectively, and a third date, 1660 ± 140 RCYBP, was obtained during the 1974 field season. The older two dates seem reasonable in view of the Denbigh artifacts from the locality; the younger date suggests an Ipiutak presence. Unfortunately, the Choris material that constitutes the largest portion of the collection remains undated.

LOCALITY III

This locality and the remaining 10 localities at Gallagher were excavated during the 1974 field season, and, as noted above, none of the assemblages have been described, much less analyzed. Locality III is one of the few Gallagher localities dominated by a single culture. Museum records indicate that 35 complete and fragmentary notched points were recovered there (Fig. 6b). These are indicative of the Northern Archaic tradition dated from 6000 to 4000 BP, although some (Esdale 2008:7) would extend the tradition until 3000 BP. Unfortunately, no datable material was recovered. A small number of Paleoeskimo artifacts are also present in this locality but are of uncertain identification beyond their Paleoeskimo affinity. Of all the localities at the site, this one, because of the intensity of the occupation, would be expected to have one or more hearths. Although we examined the collection for this locality a second time just prior to publication, we could find no record in the field notes of datable material of any kind being collected.

LOCALITY IV

Locality IV has the most diverse assemblage in the Gallagher collection. Mudstone cores and core fragments similar to those from Locality I may indicate a Paleoarctic use of the area. A single notched projectile point base indicates a Northern Archaic presence, while the majority of artifacts recovered can be ascribed to various Paleoeskimo cultures. A Denbigh occupation is attested by mitten-shaped burins (Fig. 6f) and microblades, as well as a number of projectile point fragments. A Choris presence is indicated by flake-burins, a chipped stone adz bit (Fig. 6c), and linear-stamped ceramics (Fig. 6d), although the latter could be of Choris or Norton derivation. Two conjoined fragments constitute a complete projectile point (Fig. 6i) virtually identical to a Norton specimen from Iyatayet illustrated by Giddings (1964:plate 47:1), but a similar form also occurs in Choris collections. A larger but otherwise similar fragmentary specimen with parallel-oblique flaking is probably of Choris manufacture, as is a similarly flaked projectile point base (Fig. 6g, j). Several arcuate sideblades probably are of Norton or Ipiutak origin since they differ from the common Denbigh forms, and sideblades were not heavily used by Choris people. Lastly, a curiously shaped specimen with parallel-oblique flaking (Fig. 6e) closely resembles Campbell's (1962:plate 2:16) "double-edged side scraper" from the Kayuk Complex except that the Gallagher specimen is somewhat smaller. Similar implements have also been reported from two sites on the Noatak River drainage by Anderson (1972:82, 93). The initial dates from Locality IV, 1330 ± 150 and 1665 ± 165 RCYBP, suggest an Ipiutak occupation, which is certainly plausible, but the Denbigh and Choris use of the locality remains undated. A new AMS radiocarbon date of 1160 ± 30 RCYBP (Beta-662686, Charcoal, $\delta^{13}C$ = 25.9‰) on residue from the outer surface of the pot sherd is unacceptably young given the nature of the surface treatment. Unfortunately, most of the sample passed through the 180μm sieve used in initial pretreatment, and further pretreatment was deemed likely to reduce the sample size below the minimum required for analysis. Consequently, the analysis may have been negatively affected by soluble humic acids remaining in the sample (Daniel Ponce [Beta Analytic, Inc.], pers. comm., May 18, 2023).

LOCALITY V

This assemblage is dominated by burins—three on thick flakes, one on a broken biface, and another on a retouched blade or blade-like flake, all seemingly of Choris origin. The latter artifact (Fig. 6k) is of interest because a similar specimen was recovered from the Choris beach ridges at Cape Krusenstern (Giddings and Anderson 1986:214, plate 122:r). A second unburinated blade fragment or blade-like flake was also found at Locality V. Interestingly, nine retouched blades, none displaying burin blows, were found at the Choris type site (Giddings 1957:129; Giddings and Anderson 1986:202). Giddings (1957:129) called them

"blade-like knives or scrapers" and commented that they "[resemble] closely the unifacial blades of the Old World." Other artifacts include a severely stemmed projectile point (Fig. 6h) similar to those from Near Ipiutak (Norton) burials at Point Hope (Larsen and Rainey 1948:plate 80:1, 3, and 6) and a well-made projectile point tip and a sideblade fragment of Paleoeskimo derivation that cannot be more precisely identified. A single rim sherd with obscured, but probably linear-stamped, surface treatment could be attributed to Choris or Norton culture. The radiocarbon dates from the locality, 2540 ± 185, 2135 ± 135, 1975 ± 125, and 1100 ± 160 RCYBP, are well aligned with the cultural material present.

LOCALITY VI

This undated assemblage contains a complete and a fragmentary notched point, indicating at least a transitory Northern Archaic occupation. The assemblage additionally contains a pentagonal projectile point, a type associated with Norton culture, as well as two stemmed point bases probably also of Norton derivation. Microblades presumably indicate a Denbigh presence, although they could be associated with the notched points since almost 40% of Northern Archaic assemblages contain microblades (Esdale 2008:14). A number of burin spalls in the assemblage appear to be of Denbigh rather than Choris origin, judging from their small size. The remainder of the Locality VI material contains little of diagnostic value. Also uncovered at Locality VI was a 2 ft^2 activity area containing over 1400 waste flakes, 98% of which were of black chert.

LOCALITY VII

This locality is the most varied in terms of raw material. Mudstone constitutes 26% of the debitage, more than any other locality except Locality I. Three of the four burins present are made on scarcely modified flakes, the fourth on a broken biface; all appear to be of Choris origin, as does a large parallel-obliquely flaked point base of tan chert (Fig. 7c). Bowers (1983:13) indicates that Locality VII was expanded to expose a "suspected Choris tent ring," but the result is unreported. The microblade fragments and smaller burin spalls are probably of Denbigh origin, as are several of the projectile point and sideblade fragments. The assemblage is numerically dominated by projectile points and sideblades flaked with varying degrees of finesse that are doubtless of Paleoeskimo origin but difficult to assign to a specific culture.

In addition to the above, two fragmentary Mesa projectile points were found (Fig. 7b, f). One of the point fragments (Fig. 7f) displays a pot-lid fracture, as do many point bases from the Mesa Type site (Kunz and Reanier 1994; Kunz et al. 2003). The heat source that produced the fracture is unknown, but clearly it is not the Locality VII hearths, which are less than 3000 years old. It is also unlikely that they are associated with the Late Pleistocene Locality I date obtained from charcoal lying over 50 m away. Several other large lanceolate points missing from the collection may also be Mesa points. A complete example, as noted earlier, is missing from the collection but is documented by a field-note sketch and description (Fig. 7a; Bowers 1974). The excavations at Gallagher occurred four years prior to the discovery of the Mesa Type site, yet Bowers not only noted the artifact's Paleoindian characteristics but specifically identified them as being similar to those of an Agate Basin point. Years later, after publication of the Mesa material, numerous archaeologists commented on the Mesa projectile point's similarity to the Paleoindian Agate Basin projectile point of the North American High Plains (Admiraal 2013; Bever 2000; Fisher 2018; Kunz and Reanier 1994; Kunz et al. 2003; Smith et al. 2013). The presence of Mesa points at Gallagher is of some importance but not surprising since three Mesa sites are nearby, two of which (Bedwell and Putu) are within sight of Gallagher and the other (Hilltop) is in the Atigun River Gorge only 30 km to the south. The dates from Locality VII at the time of excavation, 1735 ± 150, 2640 ± 180, and 2365 ± 170, reflect Choris, Norton, and possibly Ipiutak use of the locality. Two new dates from this locality obtained just prior to publication, 2240 ± 30 RCYBP (Beta-662688, Charcoal, $\delta^{13}C = -25.0$ ‰) and 2170 ± 30 RCYBP (Beta-662689, Charcoal, $\delta^{13}C = -24.6$), confirm the Norton use of the site but shed no light on the Mesa or Choris occupations as hoped.

Since Choris and Mesa assemblages both contain large lanceolate-shaped projectile points, some comments on distinguishing one from the other are in order. The much more robust Mesa points are crafted differently than Choris points. The basic Mesa lanceolate shape is achieved by the use of heavy, direct percussion to detach large, broad flakes terminating along the longitudinal midline, creating a pronounced lenticular to diamond-shaped cross section much thicker than that of Choris specimens. Mesa points are completed by ir-

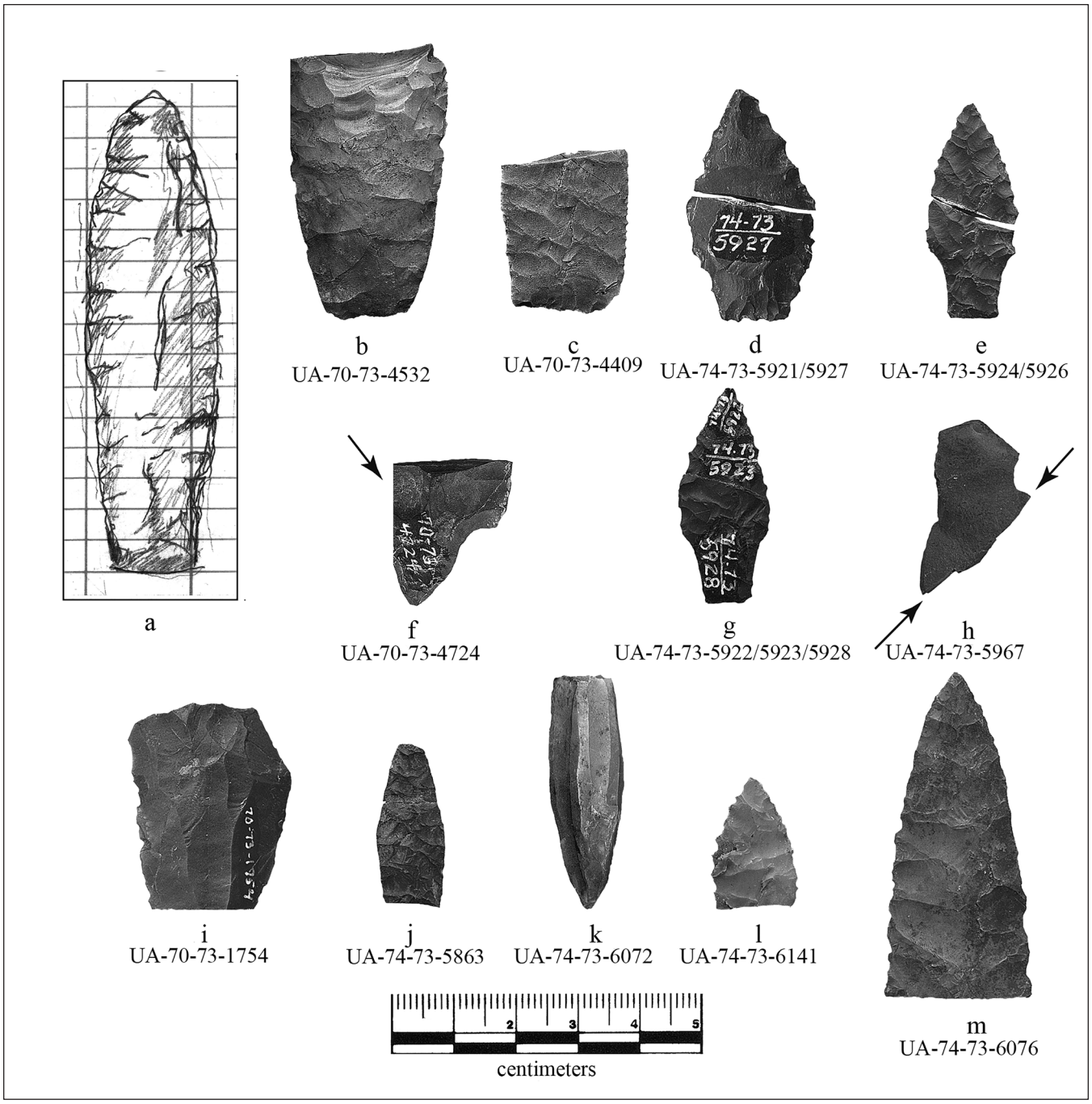

Figure 7. Artifacts from Localities VII–IX, XI–XIII: (a) sketch of missing Mesa projectile point (Bowers's field notes, 1974), Locality VII; (b) Mesa projectile point base, Locality VII; (c) Choris point base; (d–e, g) conjoined projectile point fragments, Locality VIII; (f) Mesa projectile point base with pot-lid fracture at arrow, Locality VII; (h) notched flake burin, Locality IX; (i) blade core fragment, Locality XI; (j) projectile point fragment, Locality XI; (k) microblade core, Locality 11; (l) side blade (?) fragment, Locality XIII; (m) projectile point fragment, Locality XII.

regular pressure flaking, leaving them less finely finished than most Choris points, and they never exhibit parallel-oblique flaking.[4] Additionally, while some Choris points are edge ground, the grinding is not nearly as extensive as on Mesa points that are ground along at least the lower two-thirds of the point with such force that the negative bulbs of percussion from finishing flake removal are obscured. The point's base is equally heavily ground (Bever 2000; Fisher 2018; Kunz and Reanier 1994; Kunz et al. 2003). This suite of readily identifiable traits clearly separates Mesa points from Choris points and can readily be seen by comparing Fig. 7b (Mesa projectile point) with Fig. 6f (Choris projectile point).

LOCALITY VIII

The three complete projectile points from here (Fig. 7d–e, g), all of conjoined fragments, resemble Choris points from Onion Portage (Anderson 1988:fig. 104–105), although similar forms are found in Norton collections. The crude flaking of one specimen suggests that it was broken during manufacture. Two fragmentary bifaces consist of a point base and tip. The point base is practically identical to the Norton specimen illustrated from Locality V. The relatively large point tip is probably of Choris or perhaps Norton manufacture. The final noteworthy Locality VIII artifact is a relatively wide burin spall resembling those found in Choris assemblages.

LOCALITY IX

The only clearly diagnostic artifacts from this small collection are a notched flake-burin (Fig. 7h) and a relatively wide burin spall, both likely of Choris affiliation. One of the two sideblades present appears to be of Denbigh origin; the other could belong to any Paleoeskimo culture. Two radiocarbon dates were obtained from this locality, 2665 ± 180 and 970 ± 160 RCYBP. The former date is consistent with a Choris occupation while the latter indicates Neoeskimo use of the site.

LOCALITY X

This small locality produced only a single possibly diagnostic artifact, a large, thick burin spall thought to be of Choris origin. Charcoal from the locality dated to 1780 ± 150, suggesting an Ipiutak use of the site.

LOCALITY XI

This locality is the second largest excavation unit (592 ft^2) at the site and also has one of the largest assemblages. Unfortunately, no datable material was recovered. Conspicuous in the assemblage is a mudstone blade core (Fig. 7i) and microblade core (Fig. 7k) similar to those reported from Locality I. The Northern Archaic tradition is represented by a complete notched point and the base of another. A number of chert microblades in the assemblage are presumably of Denbigh origin, as are the burin spalls, but again the microblades could also be associated with the notched points. A relatively thin parallel-sided projectile point with parallel-oblique flaking (Fig. 7j) is likely of Choris origin. The assemblage contains additional projectile point and sideblade fragments, many of them quite small. These are clearly related to the Paleoeskimo cultures but cannot be further identified.

LOCALITY XII

This undated locality produced a slender mudstone microblade core (Fig. 7k) of uncertain pedigree, two sideblade fragments, and the tip and midportion of a large projectile point. The two rounded and relatively wide sideblade fragments are of a shape more common to Norton and Ipiutak sideblades than to those of Denbigh. The projectile point fragment resembles the larger specimens from the Choris weapon cache from Beach 46 at Cape Krusenstern (Giddings and Anderson 1986:plate 124:f and qqq) in form and size but lacks the parallel-oblique flaking characteristic of the Cape Krusenstern pieces. The last artifact of interest is the tip and partial midsection of a large chert weapon point (Fig. 7m), probably of the type described by Murdoch ([1892] 1988:242–243) used prior to the introduction of firearms to dispatch swimming caribou from kayaks. If this identification is correct, it is the only recognizable Neoeskimo artifact in the entire Gallagher assemblage.

LOCALITY XIII

This small locality contains only three possibly diagnostic artifacts, a microblade fragment, a flake-burin, and a projectile point or sideblade fragment. The microblade fragment is probably of Denbigh origin, while the flake-burin is of Choris manufacture. The projectile point/sideblade fragment (Fig. 7l) is quite similar to a specimen from

the Choris type site illustrated by Giddings (1957:fig. 9:1) as a projectile point fragment but is erroneously called a drill bit in the text, even though the unilateral serration of the specimen suggests it is a sideblade.

LOCALITY I REVISITED

The identification of Mesa Complex artifacts at Gallagher requires rethinking of the Late Pleistocene use of the site. Ferguson (1997a:64) had questioned the association of the Late Pleistocene date with the Locality I assemblage, suggesting instead that the 6960 ± 90 RCYBP date he obtained on archived charcoal from the 1970 excavation properly dates the assemblage. If Ferguson's argument is accepted, and it seems reasonable to do so, then the Late Pleistocene date must be from an unrecognized early culture or naturally derived. The presence of Mesa artifacts elsewhere in the site also suggests the date need not be associated with the Locality I assemblage or with a natural phenomenon for the lack of other possibilities. In view of Mesa Complex dating and geographic distribution, it is possible that the 10,540 ± 150 RCYBP date is of Mesa origin: a date, incidentally, that is statistically identical to dates from two nearby Mesa sites—Hilltop 10,360 ± 60 (Reanier 1995:41) and Bedwell 10,490 ± 70 RCYBP (Reanier 1996:510).

Another concern is determining the cultural origin of lithic assemblages like that of Locality I, a problem recognized by Bowers (1982:97) 40 years ago and by Ferguson (1997a:73) 25 years ago. Presumably Locality I was a quarry or near-quarry lithic workshop that focused on core reduction, leaving behind material common to any blade-producing culture engaged in similar activities. The Locality I assemblage is typically associated with the core and blade cultures of the Late Pleistocene–early Holocene included in the American Paleo-Arctic tradition as defined by Anderson (1968), here spelled Paleoarctic, or in one of several permutations of Anderson's concept. Ferguson (1997a:77) points out that the Locality I assemblage has little in common with other members of the tradition and concludes the assemblage is so placed largely because of the Late Pleistocene age attributed to it. In light of the questionable dating and Bowers's contention that the cultural status of the assemblage cannot be determined, the Locality I material presently appears to be of little or no value in elucidating culture history.

DISCUSSION

Clearly, the major appeal of the Gallagher Flint Station through time has been the unrestrained view of the Sagavanirktok River valley it provides. What most distinguishes Gallagher from other game-lookout sites is its exceedingly long record of use—a record so long that the earliest occupants may have been hunting *Bison priscus* and other Pleistocene megafauna in addition to caribou. Further, the site has been used by all the presently known regional archaeological cultures.

The abundance of archaeological material at Gallagher is not fortuitous. The site lies in a broad ecotone or transitional zone bordered on the south by the Brooks Range and on the north by the Arctic Coastal Plain or North Slope, a 124,000 km^2 region termed the Arctic Foothills physiographic province by Wahrhaftig (1965) and the Arctic Foothills Ecoregion by Gallant et al. (1995). Virtually all our knowledge of the prehistory of interior Arctic Alaska comes from sites excavated in this region, for example Atigun (Wilson 1978), Mosquito Lake (Kunz 1977), Putu (Alexander 1987; Reanier 1995), Mesa (Kunz and Reanier 1994), and Punyik Point (Irving 1964), to mention only some.

The southern portion of the Arctic Foothills province, the area of our interest, is comprised of irregular buttes, mesas, and east–west-oriented ridges rising from 400 m to well over 1000 m above sea level. Ecotones are often biologically richer than the areas bordering them (Odum 1971:157), and this is clearly the case with the Arctic Foothills, where 390 species of vascular plants have been recorded, while the neighboring Brooks Range and North Slope provinces support only 316 and 284 species, respectively (Spetzman 1959:52). That richness is even more evident in the archaeological record. The area adjacent to the pipeline and Dalton Highway, that is the pipeline corridor, is quite well known thanks to numerous archaeological studies conducted there in response to petroleum industry activity as recorded by the AHRS (2022). Fifty-one archaeological sites (2.2 sites/mile) have been identified in the 24-mile-long section of the corridor in the northern Brooks Range, 193 sites (5.4 sites/mile) in the Arctic Foothills segment, and only 38 sites (0.35 sites/mile) in the lengthy North Slope portion of the corridor. Thus, the site density in the Arctic Foothills province is well over twice that of the adjoining provinces combined.

Gallagher is located close to Oksrukuyik Creek and its robust growth of felt-leaf willows (*Salix alaxensis*). This species attains heights of over 2 m and is a critical source of wood for fuel and other uses in this otherwise treeless region. Numerous tent rings, presumably of Nunamiut origin, occur along Oksrukuyik Creek (e.g., PSM-078, 103, 105, 108), probably because of the abundance of willows found there. The proximity of the Oksrukuyik Creek willows may have provided an additional attraction to Gallagher occupants through time. In addition, the creek in the vicinity of Gallagher is sheltered from the north wind by adjacent Slope Mountain. The creek also attracts moose, and groups of as many as 18 individuals have been observed there in recent times (Huryn and Hobbie 2012:271). The subsistence importance of moose in prehistoric northern Alaska has received little attention, probably due to their scarcity there until the late nineteenth or early twentieth centuries (LeResche et al. 1973:7). This does not preclude the presence of moose in earlier times, however. Hall (1973:294–295) points out, for example, that moose bones have been recovered from archaeological sites dating to the fourteenth century on the Beaufort Sea Coast and from the early nineteenth century at Tukuto Lake. Paleontological evidence indicates that moose have been present north of the Brooks Range for at least the past 14,000 years (Groves et al. 2022; Mann et al. 2013, 2015).

RADIOCARBON DATING

Turning to the Gallagher radiometric data, 18 of the 23 radiocarbon dates, as noted above, were acquired in the early 1970s, long before the advent of more precise AMS dating, and thus have excessively large standard deviations. The dates are nevertheless useful. Viewing the dates collectively at two sigma (Table 1) reveals gaps of over 3000 years following the terminal Pleistocene date from Locality I and again following the 6960 RCYBP date from the same locality obtained by Ferguson (1997a). There is currently little evidence that the site was occupied immediately following the Late Pleistocene. This is not the case following the Ferguson date because of a substantial Northern Archaic use revealed by the presence of numerous notched projectile points. The Northern Archaic occupation at Gallagher is regrettably undated, but the tradition dates from ~6000 or earlier, to ~4000 BP elsewhere. The remaining 16 dates and the two new dates when calibrated at two sigma fall, with two exceptions, within the Paleoeskimo time range (Fig. 8). The exceptions are the 650–1178 (Locality VIII) and 724–1299 cal BP (Locality V) dates, indicating Neoeskimo use of the site. Interestingly, with one possible exception, no clearly Neoeskimo artifacts have been found at the site, even though the tent rings along Oksrukuyik Creek are likely of Neoeskimo origin

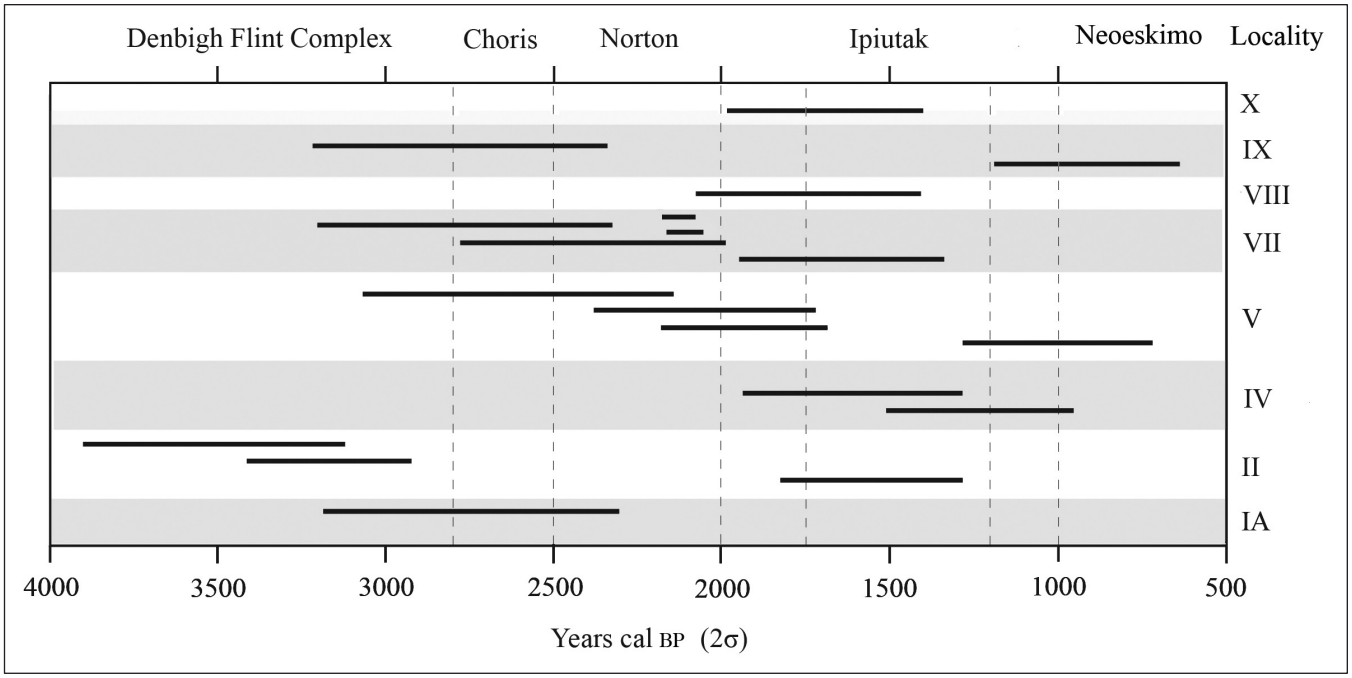

Figure 8. Distribution of Gallagher radiocarbon dates from 4000–500 cal BP.

and the abundance of local Iñupiaq place names attests to the recent Indigenous familiarity with the region. Unfortunately, the large standard deviations diminish the usefulness of the Paleoeskimo dates. This is the most pronounced with Choris, where the average applied standard deviation of the dates, 318 years, exceeds the duration of that culture. Nevertheless, discounting the two dates from inadequately pretreated samples, 15 of the remaining Gallagher dates clearly fall within the Paleoeskimo continuum but, as Figure 8 shows, only two entries, both from Locality II and both in the Denbigh date range, unambiguously date a component of the site.

CONCLUSIONS

The discovery of a Mesa Complex component at the site is certainly the most unexpected aspect of this study and only adds to the importance of this largely ignored site. Reviewing the Gallagher assemblages, mudstone core and blade material occurs in three localities and is the major constituent of Locality I. Paleoindian artifacts were reported only from Locality VII, where they occur in a mixed assemblage; Northern Archaic material was found in four localities and is the major component of Locality III. Denbigh material occurs in eight localities, Choris in nine localities, and Norton-Ipiutak in five localities. The abundance of Choris artifacts is surprising given the scarcity of recorded Choris sites. The Choris numbers may be somewhat inflated since we considered all flake-burins of Choris origin when they also occur in some Paleoarctic cultures. Nevertheless, the restricted presence of Paleoarctic material at Gallagher, if present at all, and the preponderance of Paleoeskimo artifacts and dates suggests that most, if not all, of the flake-burins are of Choris origin. Curiously, Norton and/or Ipiutak artifacts were found in only five of the 13 localities. However, it is likely that many specimens, particularly those lacking parallel-oblique flaking, identified only as Paleoeskimo were of Norton or Ipiutak origin.

In closing, it is unfortunate that the major portion of material recovered from Gallagher has been overlooked by scholars for more than 50 years. We encourage researchers to examine the massive amount of material previously recovered from the site. Eleven of the 13 excavated localities appear to be unstudied or, if studied, unpublished. Perhaps the most intriguing aspect of the unstudied material is the possibility of a Choris tent ring in Locality VII, but it remains to be seen if a tent ring is actually present. Even in the absence of a tent ring, there is a substantial amount of Choris material in the Gallagher collection, not only in Localities II and VII but in other localities as well. Increasing our knowledge of this poorly known component, particularly its inland aspects, would be a substantial and much-welcomed contribution to regional cultural history. The presence of pentagonal-shaped projectile points, a hallmark of Norton culture, is also of great interest. Norton culture is relatively uncommon in north Alaska and, with the exception of Band 2 at Onion Portage, seems largely confined to coastal settings. There is also the possibility of obtaining additional radiocarbon dates from the site. We know from our brief examination of the Gallagher collection that there are a number of archived carbon samples. Further, the northern portion of the site largely remains unexcavated and could be excavated relatively inexpensively, at least by Arctic standards, because it is road accessible. Where else in Arctic Alaska can a major archaeological site be reached by automobile, or, for that matter, by hitchhiking?

ENDNOTES

1. John Cook (b. 1938) passed away on December 22, 2017. For some time prior to his passing, the three of us, the oldest of the remaining TAPS archaeological cadre, often discussed the importance of the Gallagher Flint Station and bemoaned the fact that most of the site has been overlooked by researchers. Not only have most of the Gallagher assemblages remained unstudied, even knowledge of their existence is largely confined to those of us who worked on the northern sections of the TAPS Archaeological Project. Following a discussion during the 2015 Alaska Anthropological Association Annual Meeting, we decided that a paper focusing on this sadly neglected site was in order. We had scarcely begun work on the paper when John died. Nevertheless, much of this paper results from John's knowledge and insight and, although he left us prior to its completion, he deserves as much credit for it as we do. Rest in peace, JPC.
2. The Arctic Small Tool tradition as originally defined (Irving 1962, 1964) included only the aceramic, microblade-using Denbigh Flint Complex and the closely related Pre-Dorset, Saqqaq, and Independence

I cultures of Arctic Canada and Greenland. Anderson (1968, 1979) subsequently expanded the concept to include Choris, Norton, and Ipiutak cultures without changing the name of the tradition, creating ambiguity in the literature. See also Dumond (2000:100*n*1).

3. Our use of the term "flake-burin" is much more restrictive than that of Giddings (1964:217), which encompasses all burins from Iyatayet not made on microblades.
4. To see the manufacture of a mesa point enter "flint knapping a mesa point" in your browser.

ACKNOWLEDGEMENTS

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