

GEOLOGICAL INSTITUTE RADIOCARBON DATES III*

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GIN-152. Kut site, Ukrainian SSR **4090 ± 80**
[2140 B.C.]**

Charcoal from campsite hearth from Zozov village, Rovno Oblast [Rovno city: 50° 30' N Lat, 26° 12' E Long], Ukrainian SSR. Kut hamlet, semi-subterranean Dwellings VII and VIII. Corded pottery culture; (cf. Gimbutas, 1956 [D.B.S.]). Subm. by I. K. Sveshnikov, Inst. of Social Studies, L'vov.

Krasnoye Selo series, Volkovysk Raion, Belorussian SSR

GIN-148. Krasnoye Selo **4310 ± 45**
[2360 B.C.]

Charcoal from Krasnoye Selo settlement, Volkovysk Raion [53° 09' N Lat, 24° 28' E Long], in Neolithic shafts for mining flint. Sample from torches found in Shaft 13. Excavated and coll. by N. N. Gurina, Inst. of Archaeol., Acad. of Sci., USSR.

GIN-164. Krasnoye Selo **5050 ± 25**
[3100 B.C.]

Charcoal from same location from torches found in Shafts 3, 11, and 18. Greater quantity of material ensured smaller standard error for this trial than for sample GIN-148.

GIN-163. Narva II site, Estonian SSR **13,400 ± 330**
[11,450 B.C.]

Wood from Narva R., Narva II campsite [59° 25' N Lat, 28° 10' E Long]. Excavated and coll. 1952 by N. N. Gurina. Sample, according to C¹⁴ analysis, reveals late Paleolithic age. *Comment* (D.B.S.): see also Tartu I, 1966 (Radiocarbon, v. 8, p. 431-432), esp. TA-17, 40, 52, 41, 25, and 53; note that dates derived from TA series are substantially younger than indicated in GIN-163 above. GIN-163 is highly implausible because Narva-Kunda area was freed of glaciation only in Allerød Period—11,000-10,800 yr B.P. (See Grichuk *et al.*, 1966, p. 19).

GIN-173. Cheremoshnik, Yaroslavl' Oblast **33,300 ± 500**
[31,350 B.C.]

Wood from Cheremoshnik village, outskirts of Rybinsk [58° 05' N Lat, 38° 55' E Long], in peat from ravine, at depth 4.5 to 5 m. Coll.

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** Information in brackets interpolated by translator (E.M.S.) and commentator (D.B.S.).

1965 by N. V. Kind. Attributed by A. I. Moskvitin (1966), from pollen data, to 1st half of Mikulino [Eem] Interglacial. For technical reasons, sample was removed from near surface without deep cleaning; date, therefore, is probably too young. Previous date of analogous sample is 31,600 yr (Le-17). Another date, 19,500 \pm 300 yr LE[RUL]-199, Inst. of Archaeol. I, 1965), is evidently also in error.

GIN-174. Moscow Canal Diversion, Yaroslavl' Oblast >45,000

Wood from Moscow Canal Diversion, 5 km from connection with Volga R., Sta. 50 [56° 40' N Lat, 37° 10' E Long]. From peat in lentil of lacustrine deposits overlying Dnepr (?) [Mindel] till. Inferred geologic age: either Mikulino [Eem] or Mologo-Sheksnya [Paudorf] Interglacial.

GIN-175. Volga River, Yaroslavl' Oblast >50,000

Wood from right bank of Volga R. on outskirts of Tutayev [57° 50' N Lat, 39° 35' E Long], 600 to 700 m above mouth of Dolgopolka R. [Cf. also LG-1, All-Union Geol. Inst. I (D.B.S.)]. From peat within lake-bog clay between 2 tills. Inferred geologic age: Mikulino [Eem] Interglacial. Previous date for this sample, 15,700 \pm 300 yr (LE[RUL]-197, Inst. of Archaeol. I, 1965) is evidently erroneous.

Cheremukha River series, Yaroslavl' Oblast

30,700 \pm 300

GIN-176. Cheremukha River

[28,750 B.C.]

Wood from Cheremukha R., suburbs of Rybinsk [58° 05' N Lat, 38° 55' E Long]. At depth 9.5 m in lacustrine sediments forming lower part of cross section of 10 to 12 m terrace, and 1.5 m below lacustrine deposits underlying alluvium. According to A. I. Moskvitin (1966) and V. A. Novskiy (1958) deposits belong to Mologo-Sheksnya [Paudorf] Interstadial. Sample Le-25, ca. 20 to 50 cm = 39,000 \pm 2000 yr (Neustadt, 1965, p. 65), and Mo-26 (same depth) = 42,700 \pm 2000 yr (*ibid.*). Dates are consistent, since differences do not go beyond respective counting errors (4 δ). Coll. 1965 by N. V. Kind.

GIN-177.

>49,000

Wood from same location, from depth 1.5 to 1.8 m below GIN-176 from base of dense bluish-gray loam at water level. Inferred age same as GIN-176. (Cf. also MO-304 and LG-6A from slightly different locality. [D.B.S.]

GIN-178. Chermenino, Yaroslavl' Oblast

>52,000

Wood from Chermenino village [58° 04' N Lat, 38° 52' E Long], 8 to 9 km below Rybinsk. At base of 13-m terrace of Volga R. containing sandy alluvium with Unionidae. Sample taken at water level. Age according to A. I. Moskvitin (1966) is Mologo-Sheksnya [Paudorf]; according to V. P. Grichuk (1966), Mikulino [Eem]. Coll. 1965 by N. V. Kind. Samples located higher in same exposure: Le-21 (depth 2 m) 25,900 \pm 900 yr; Le-22 (depth ca. 2.5 m) 28,800 \pm 2000 yr; Le-23 (1 m

above water level) $31,900 \pm 800$ yr (Starik and Arslanov, 1961). Sample Mo-307 (Vernadsky Inst. IV), analogue of Le-21, depth 2 m, was $>28,000$ yr when measurement was repeated in another lab. (Cf. also LG-4A and 4B, LG-5, All-Union Geol. Inst. I [D.B.S.]).

GIN-197. Berendeyevo I site, Yaroslavl' Oblast **7730 \pm 40**
[5780 B.C.]

Birchbark from Berendeyevo I campsite, Berendeyevo swamp [$56^{\circ} 35'$ N Lat, $39^{\circ} 00'$ E Long] in Pereslavl' Raion, Yaroslavl' Oblast. Pile dwelling of pit-and-comb-marked pottery period (early Neolithic) (Gimbutas, 1956). Burial 20 cm below cultural stratum of campsite, wrapped in birchbark. Wood (piling) from campsite gave date 5730 ± 120 yr (GIN-112, Geol. Inst. II), which fully agrees with dates 5415 ± 195 yr (Mo-209, Vernadsky Inst. I-IV, 1966) and 6090 ± 210 yr (Mo-211, *op cit.*) received for strata of peat deposit, between which cultural stratum of campsite is located.

GIN-190. Ples, Ivanovo Oblast **28,520 \pm 170**
[26,570 B.C.]

Peat from Ples [$57^{\circ} 25'$ N Lat, $41^{\circ} 30'$ E Long], left bank of Gremyachka ravine, from lacustrine-alluvial lentil overlying Dnepr (?) till. Inferred geologic age: Mikulino [Eem]. Coll. 1965 by N. V. Kind. *Comment:* date probably too young, as is Le-19, $36,600 \pm 1500$ yr (Neustadt, 1965, p. 65) for wood from same exposure; in latter case smallness of sample affected preparation.

GIN-151. Kaindy-Su, Kirgiz SSR **7350 \pm 100**
[5400 B.C.]

Charcoal from Kaindy-Su [river], Naryn R. Basin [unlocated; within $42^{\circ} 20'$ - $40'$ N Lat, 74° E Long], W Tyan Shan, Kirgiz SSR. From II terrace of river, sandy-clayey layer of lacustrine-alluvial deposits; depth, 12.1 m. Clayey streak contains charcoal. Inferred geologic age: early Holocene. Coll. 1964 by E. A. Fin'ko, Inst. of Geog., Acad. of Sci., USSR.

GIN-161. Chile River, Kirgiz SSR **3155 \pm 65**
[1205 B.C.]

Charcoal from Chile R., Dzheyranbel' Pass [$39^{\circ} 55'$ N Lat, $73^{\circ} 00'$ E Long], N slopes of Alay Range, Kirgiz SSR. Remains of primitive smelting furnace and fragments of slag with streaks of charcoal and bits of smelted ore (lazurite and malachite), lie in diluvial deposits, 1.7 to 2.0 m thick, perpendicular to slope of streamlet. Inferred [archaeologic] age: not earlier than Late Bronze. Coll. 1964 by G. P. Pshenin, Inst. of Geog., Acad of Sci., USSR.

Igarka series

GIN-179. Igarka, Krasnoyarsk Krai **9200 \pm 40**
[7250 B.C.]

Wood from base of water-divide peat bog, 2 km N of city, on road to Graviyku settlement, Igarka, Karsnoyarsk Krai [$67^{\circ} 30'$ N Lat, 86°

30' E Long]. Contact of peat with underlying lacustrine alluvium is at depth 1.35 m. Inferred age: Holocene. Samples GIN-179 to 181 subm. by G. M. Levkovskaya, Leningrad State Univ.

GIN-180. Igarka **9480 ± 120**
[7530 B.C.]
Peat from depth 1.15 m. Holocene.

GIN-181. Igarka **6030 ± 100**
[4080 B.C.]
Peat from depth 40 to 45 cm. Holocene.

GIN-162. Chadobets River, Krasnoyarsk Krai **24,800 ± 120**
[22,850 B.C.]

Wood from Chadobets R. [mouth: 58° 40' N Lat, 98° 45' E Long], lower course N Angara region. I terrace above flood plain, . . . "in situ, 1 m above mean water level, in alluvium with Upper Pleistocene fauna: mammoth, *Coelodonta antiquitatis*, *Equus caballus*, *Bison priscus*, *Bison* sp., *Bos (Bison)* sp., *Rangifer tarandus*, *Megaloceros* sp., *Cervus elaphus*" (Grichuk et al., 1966, p. 220; summary description ambiguous. [D.B.S.]

Overlain by flood-plain deposits and periglacial alluvia with large icewedge casts pertaining to Sartanskoye [Würm III] Glaciation. Inferred age: beginning of Sartanskoye Glaciation. Subm. by S. A. Laukhin, Moscow State Univ.

GIN-141. Irkut River, Buryat-Mongol ASSR **4480 ± 25**
[2530 B.C.]

Wood from high flood plain (3.5 m), deposited from loam, in upper course of Irkut R., W part of Tunka lowland [51° 45' N Lat, 102° 35' E Long]. Sample taken 0.5 m above water level. From pollen diagram, lower part of section corresponds to Holocene climatic optimum. Coll. 1961 by E. I. Ravskiy, Geol. Inst., Acad. of Sci., USSR.

GIN-142. Ulu-Gorkhon River, Buryat-Mongol ASSR **10,170 ± 140**
[8220 B.C.]

Wood from Ulu-Gorkhon R. [near 51° 45' N Lat, 103° 00' E Long], branch of Irkut, Tory lowland. From clay at base of 6-m terrace. Inferred age (from pollen data): Karginskoye [Paudorf (?)]. Coll. 1961 by E. I. Ravskiy.

GIN-153. Samaldynkan River, Yakut ASSR **10,325 ± 35**
[8402 B.C.]

Wood from left bank of Lena R., I terrace above flood plain of Samaldynkan R. [66° 50' N Lat, 122° 35' E Long], Zhigansk Raion, Yakut ASSR. [Given in map data as Samal'dzhikan R., branch of Khoroungka R., which is a W branch of Lena R. Coordinates given are for mouth of Samal'dzhikan (D.B.S.)] Sample from bottom of exposed alluvium. Pollen diagram shows forest. Inferred age: Karginskoye [Paudorf (?)]. Coll. 1964 by S. A. Garkusha, Moscow State Univ. and V. V. Kolpakov (VAGT). [Abbreviation unknown (E.M.S.).]

GIN-154. Lena River, Yakut ASSR **>45,000**

Wood from right bank of Lena R., below Zhigansk village [66° 45' N Lat, 123° 20' E Long]. In outwash of deposits from glacial river valley which skirted edge of glacial during 1st Zyryanka [Würm I and II (?)] Glaciation. Inferred age: beginning of Zyryanka Glaciation. Subm. 1965 by S. A. Garkusha.

Niimingde River series, Yakut ASSR**GIN-155. Niimingde River** **33,700 ± 800**
[31,750 B.C.]

Wood from upper part of lacustrine-alluvial sand with peat from Niimingde [Nimingde] R., branch of Sobolookh-Mayan R., E tributary to Lena R., Yakut ASSR [67° 25' N Lat, 125° 20' E Long]. Inferred age: either interstadial between 1st and 2nd phases of Zyryanka [Würm I and II (?)] Glaciation or Karginskoye Interglacial [Paudorf Interstadial (?)]. Subm. 1965 by S. A. Garkusha.

GIN-149. Niimingde River **40,760 ± 580**
[38,810 B.C.]

Wood from 2-m peat layer in alluvium, overlain by 10-m lacustrine-alluvial and fluvial-glacial sediments, from locality of GIN-155, 35 to 40 km from piedmont of Verkhoyansk Mts. Sediments related to Sartanskoye [Würm III (?)] terminal moraine, and "cold" pollen spectrum. Inferred age: Karginskoye [Paudorf (?)]. Coll. 1964 by S. A. Garkusha.

GIN-188. Kuraanakh-Salaa River, Yakut ASSR **25,900 ± 150**
[23,950 B.C.]

Wood from Kuraanakh-Salaa R. [mouth: 69° 55' N Lat, 132° 30' E Long], in W part of coastal plain. Wood is from depth 19 m in lacustrine sediments containing vertebrates of "Upper Paleolithic Complex." Inferred age: Upper Pleistocene. Subm. by I. E. Timashev, Second Hydro-geol. Adm.

GIN-150. Tirekhtyakh River, Yakut ASSR **1010 ± 25**
[A.D. 940]

Wood from depth 1.5 m in alluvium in terrace of Tirekhtyakh R. [66° 05' N Lat, 143° 45' E Long], branch of Moma R., Indigirka basin. Analogous terrace of branch of Tirekhtyakh R. is overlain by deposits of youngest mt. glaciation. Inferred age: Middle (?) Holocene. Subm. by B. A. Onishchenko, Siberian Div., Acad. of Sci., USSR [Novosibirsk].

GIN-143. Malyy Anyuy River, Yakut ASSR **42,800 ± 400**
[40,850 B.C.]

Wood from Malyy Anyuy R. [general location 68° N Lat, 162-168° E Long], 8 km above mouth of Vesylaya R. Peat in lacustrine-alluvial deposits of Kolyma R.; depth 10 m. Overlain by peat, presumably of Karginskoye [Paudorf (?)] proper; underlain by lacustrine silt presumably of Zyryanka [Würm I and II (?)] Age. Inferred age: Karginskoye. Coll. 1964 by M. N. Alekseyev, Inst. of Geol., Acad. of Sci., USSR.

6665 ± 110

GIN-182. Amguyema site, Magadan Oblast, Siberia [4715 B.C.]

Charcoal from Amguyema R. middle course [67° 20' N Lat, 178° 00' W Long], Chukchi Natl. Okrug. Amguyema IV campsite is on rocky headland (elev. 6 m) at base of loam layer, Amguyema R. terrace. Culture is early Neolithic. Subm. by N. N. Dikov, Siberian Div., Acad. of Sci., USSR, Magadan.

3900 ± 100

GIN-183. Yelizovo site, Kamchatka [1950 B.C.]

Charcoal from Avacha R., Kamchatka at 8-m terrace on left bank of river at Yelizovo village [53° 05' N Lat, 158° 20' E Long]. Cultural stratum of Yelizovo campsite at depth 1 m in brown silt. Culture is early Neolithic. Subm. by N. N. Dikov.

Ushki I site series, Kamchatka

7600 ± 300

GIN-184. Ushki I site [5650 B.C.]

Charcoal from Ushkovskoye Lake, connecting with Kamchatka R., near Klyuchi village, Kamchatka [56° 13' N Lat, 160° 10' E Long]. Ushki I campsite in SW part of excavation. Hearth under IVA stratum of volcanic ash from eruption of Shiveluch Volcano. Depth, 0.7 m. GIN-184 and 186 subm. by N. N. Dikov. (Cf. also Mo-354 and 345, Vernadsky Inst. I-IV, 1966. [D.B.S.]

21,000 ± 900

GIN-186. Ushki I site [19,150 B.C.]

Charcoal from Ushki I campsite (see GIN-184). Mesolithic or Paleolithic hearth in Quadrant 2-NK at depth 10 m.

Avacha Volcano series

5555 ± 45

GIN-119. Avacha Volcano [3605 B.C.]

Charcoal from vicinity of Avacha Volcano, left bank of Sukhaya Yelizovka R., Kamchatka [53° 20' N Lat, 158° 40' E Long], in lower part of 15-m cliff. Deposits are from dike of agglomerate presumably synchronous with formation of caldera. Sample is approx. same age as charcoal from left bank of Sukhaya Khalakhtyrka R., dated at 5480 ± 70 yr (GIN-122, Geol. Inst. II, 1968). Samples GIN-119 to 121 subm. [n.d.] by I. V. Melekestsev and A. M. Chirkov, Inst. of Vulcanol., Siberian Branch, Acad. of Sci., USSR.

3300 ± 35

GIN-120. Avacha Volcano [1350 B.C.]

Charcoal from foot of Avacha Volcano, 2.5 km SE of Monakh Mts., Kamchatka, in upper part of 50- to 60-m cliff, formed by cones of 2 agglomerate dikes. Lower dike flowed at time caldera was formed.

GIN-121. Avacha Volcano **3110 ± 25**
[1160 B.C.]

Charcoal from same location as GIN-120, 1.7 km W of Monakh Mts., right bank of Kambal'nyy stream at base of 50-m cliff, formed by dike of agglomerate, younger than dike which flowed at time of caldera formation. Inferred age: near date for sample GIN-120.

GIN-170. Kondon site, Khabarovsk Krai **4520 ± 25**
[2570 B.C.]

Charcoal from Guni R. in region of Lake Evoron in Komsomol'sk Raion, Khabarovsk Krai. Neolithic settlement Kondon [51° 15' N Lat, 136° 30' E Long] is on II terrace above flood plain. Foundation of ancient dwelling; depth, 1.2 m. Culture is characterized by pottery ornamented with spirals and "Amur plaited impressions." (Cf. Tret'yakov and Mongayt, 1956, p. 120-123 [D.B.S.]). Inferred age: 2nd to 3rd millennium B.C., or older. Coll. 1963 by A. P. Okladnikov, Siberian Div., Acad. of Sci., USSR.

GIN-160. Mendeleev Volcano, Kunashiri Island, Sakhalin Oblast, Kurile Islands **4220 ± 50**
[2270 B.C.]

Charred wood from Mendeleev [Tyatya] Volcano [44° 20' N Lat, 146° 15' E Long], Kunashiri Is., 1 km N of cone of volcano, product of latest explosive eruption. Layer of crumbly lappilloid tufic dacite, depth 0.4 to 1.3 m, includes charred tree trunks and bushes. Subm. by N. A. Shpetalenko, Sakhalin Geol. Adm.

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