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TARTU RADIOCARBON DATES XI

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INTRODUCTION

This list includes dates of geologic samples measured using a single-channel liquid scintillation ^{14}C counter at the Geochemical and Statistical Laboratory, Tartu, Estonian SSR. Our modern standard is made of benzene enriched in ^{14}C and its activity is checked with NBS oxalic acid standard sample. Dates are given in conventional radiocarbon years, based on the Libby half-life of 5570 ± 30 yr. AD 1950 is the reference year. Errors refer only to 1σ standard deviation calculated from count rates involved.

GEOLOGIC SAMPLES

Estonian SSR

Haanja series

The Haanja upland in SE Estonian SSR belongs to an island deposit. Upper strata of basal Devonian deposits are at 100–160m asl. Glacial deposits 100–180m (40–50m on slopes) overlie the Devonian strata. The present upland was formed at the end of Valdai glaciation during the Haanja (Luuga) glacier retreat stage 13,500–13,200 BP. The Haanja upland consists of a variety of geologic and morphologic characteristics. Dates listed below are of sediments from center of upland, ca 300km^2.

Samples coll 1976 by H Mäemets (Mäetilga) and by E Ilves and H Mäemets 1980 (Karuniidu), 1981 (Tuuljärv), 1983 (Vaskna).

TA-1081. Mäetilga **3480 ± 70**

Bryales peat from depth 370–380cm. Pollen Zone SB1.

TA-1082. Mäetilga **5670 ± 100**

Sapropel with admixture of lime pelite from depth 550–560cm.

TA-1359. Karuniidu **870 ± 60**

Fen peat with wood remains from depth 50–60cm. Pollen Zone SA3.

TA-1396. Karuniidu **1100 ± 60**

Fen peat with wood remains from depth 100–110cm. Pollen Zone SA2.

TA-1397. Karuniidu **1920 ± 60**

Fen peat from depth 150–160cm. Pollen Zone SA1

TA-1398. Karuniidu **2180 ± 60**

Fen peat from depth 200–210cm. Pollen Zone SA1.

TA-1399. Karuniidu **2080 ± 60**

Fen peat from depth 250–260cm. Pollen Zone SA1.

TA-1400. Karuniidu **2500 ± 60**

Fen peat from depth 300–310cm. Beginning of climatic period SA.

TA-1401. Karuniidu **3000 ± 60**

Fen peat from depth 350–360cm. Pollen Zone SB2.

TA-1402. Karuniidu **3510 ± 60**

Fen peat from depth 400–410cm. Pollen Zone SB1.

TA-1403. Karuniidu **3560 ± 60**

Bryales peat from depth 450–460cm. Pollen Zone SB1.

TA-1404. Karuniidu **4120 ± 70**

Forest peat from depth 500–510cm. Beginning of climatic period SB.

TA-1405. Karuniidu **4300 ± 70**

Forest peat from depth 520–530cm. Boundary of Atlantic and Subboreal (AT and SB) climatic periods.

TA-1406. Karuniidu **6000 ± 80**

Basal layer of forest peat on sand from depth 530–550cm. Climatic period AT.

TA-1277. Karuniidu **1830 ± 60**

Buried oak trunk found overlying sediments (while digging pond). Date is from 10 outer tree rings. Sample subm 1979 by U Riispere, Inst Zoology and Botany, Tartu, Estonian SSR.

TA-1598. Tuuljärv **380 ± 100**

Carex-Sphagnum peat from depth 100–105cm. Pollen Zone SA3.

TA-1599. Tuuljärv **1670 ± 70**

Forest-*Phragmites* peat from depth 140–150cm. Pollen Zone SA2.

TA-1610. Tuuljärv **2600 ± 80**

Equisetum-Bryales peat with remains of trees from depth 240–250cm. Beginning of Pollen Zone SA1.

TA-1613. Tuuljärv **3040 ± 100**

Forest peat from depth 320–330cm. Pollen Zone SB2.

TA-1614. Tuuljärv **3560 ± 80**

Forest peat from depth 360–370cm. Pollen Zone SB2.

TA-1617. Tuuljärv **4070 ± 70**

Forest-*Phragmites* peat from depth 450–460cm. Pollen Zone SB1.

TA-1615. Tuuljärv **6560 ± 90**

Sapropel with remains *Equisetum* from depth 480–490cm. Pollen Zone AT2.

TA-1616. Tuuljärv **7940 ± 80**

Phragmites-Bryales peat from depth 490–500cm. End of climatic period BO.

TA-1515. Tuuljärv **8790 ± 80**

Partially decomposed Bryales peat from depth 560–570cm. Beginning of climatic period BO.

TA-1694. Vaskna **830 ± 60**

Carex peat with remains of trees from depth 25–30cm. Pollen Zone SA3.

TA-1693. Vaskna **1510 ± 70**

Forest-*Carex* peat from depth 30–35cm. Boundary of Pollen Zones SA2 and SA3.

TA-1692. Vaskna **2120 ± 60**

Forest-*Carex* peat from depth 45–50cm. Pollen Zone SA2.

TA-1691. Vaskna **2300 ± 60**

Forest-*Phragmites* peat from depth 50–55cm. Boundary of Pollen Zones SA2 and SA1.

TA-1690. Vaskna **2590 ± 60**

Forest-*Carex* peat from depth 55–60cm. Boundary of climatic periods SB and SA.

TA-1698. Vaskna **4210 ± 60**

Forest-*Carex* peat from depth 70–75cm. Pollen Zone SB2.

TA-1688. Vaskna **5030 ± 60**

Forest-*Carex* peat from depth 80–85cm. Pollen Zone SB1.

TA-1687. Vaskna **6850 ± 60**

Forest-Bryales peat from depth 95–100cm. Climatic period AT.

TA-1686. Vaskna **7250 ± 60**

Equisetum-Eriophorum peat from depth 110–115cm. End of climatic period BO2.

TA-1727. Vaskna **8050 ± 60**

Bryales peat from depth 115–120cm. Pollen Zone BO2.

TA-1685. Vaskna **8280 ± 60**

Bryales-*Phragmites* peat from depth 125–130cm. Pollen Zone BO2.

TA-1737. Vaskna **8730 ± 60**

Bryales peat from depth 145–150cm. End of climatic period PB.

TA-1684. Vaskna **9680 ± 70**

Bryales-*Phragmites* peat from depth 160–165cm. Upper layer of climatic period PB.

TA-1683. Vaskna **9870 ± 70**

Dy from depth 170–175cm. Climatic period PB.

TA-1682. Vaskna **9970 ± 70**

Sapropel from depth 185–190cm. Climatic period PB.

TA-1600. Vaskna **9930 ± 70**

Sapropel from depth 200–205cm. Beginning of climatic period PB.

Järvesoo series

Järvesoo bog, 90ha, lies in Saaremaa Island, 18km W of Kuressaare and is formed of fen and mesotrophic peat. Samples coll 1977 by E Ilves and A Sarv, Inst Zoology and Botany, Inst Geology, Tartu.

TA-771. Järvesoo **1420 ± 70**

Peat from depth 20–30cm.

TA-772. Järvesoo **1460 ± 70**
Peat from depth 60–70cm.

TA-773. Järvesoo **1450 ± 70**
Peat from depth 70–80cm.

TA-774. Järvesoo **1750 ± 70**
Peat from depth 80–90cm.

TA-775. Järvesoo **4090 ± 80**
Peat from depth 100–110cm.

TA-776. Järvesoo **4570 ± 80**
Peat from depth 110–120cm.

TA-778. Järvesoo **5440 ± 70**
Peat from depth 130–140cm.

TA-779A. Järvesoo **6280 ± 90**
Peat from depth 160–170cm.

TA-779B. Järvesoo **6510 ± 70**
Lake lime from depth 160–170cm.

TA-780. Järvesoo **6770 ± 90**
Lake lime from depth 220–230cm.

TA-777. Järvesoo **7610 ± 80**
Lake lime from depth 260–270cm.

TA-781. Järvesoo **8380 ± 80**
Lake lime from depth 320–330cm.

TA-782. Järvesoo **8800 ± 90**
Lake lime from depth 340–350cm.

Ukrainian SSR

Stojanov series

Stojanov bog lies in Malye Polesje near Stojanov village, Lvov oblast, Ukrainian SSR. Bog is drained and peat extracted. Peat stratum reaches thickness of 5.25m. Samples coll and subm 1978 by A T Artjushenko and L G Bezus'ko, N G Holodnyi Inst Botany, Kiev, Ukrainian SSR (Bezus'ko, Ilves & Kayutina 1980).

TA-1214. Stojanov **600 ± 70**
Carex peat with remains of *Phragmites* from depth 35–40cm. Pollen Zone SA2.

TA-1215. Stojanov **1130 ± 60**
Carex peat with remains of *Phragmites* from depth 85–90cm. Boundary of Pollen Zones SA2 and SA1.

TA-1216. Stojanov **1900 ± 70**
Carex peat with remains of *Phragmites* from depth 140–145cm. Pollen Zone SA1.

TA-1321. Stojanov **2680 ± 70**

Carex-Phragmites peat from depth 202–203cm. Climatic period SB.

TA-1322. Stojanov **3390 ± 70**

Carex-Phragmites peat from depth 298–303cm. Pollen Zone AT2.

TA-1323. Stojanov **4850 ± 70**

Carex-Phragmites peat from depth 348–353cm. Pollen Zone AT2.

TA-1217. Stojanov **6280 ± 70**

Carex-Phragmites peat from depth 423–428cm. Pollen Zone AT1.

TA-1218. Stojanov **7360 ± 70**

Phragmites peat from depth 498–503cm. Pollen Zone SB.

Byelorussian SSR

Sudoble series

Samples from basal sediments, 300m from W shore of Sudoble Lake, 5km SE of Zhodino, Smolevitschki dist, Minsk Obl. Samples coll and subm 1979 by I I Bogdel, V I Lenin Byelorussian State Univ, Minsk (Bogdel *et al* 1983).

TA-1219. Sudoble **2360 ± 80**

Dy from depth 140–160cm. End of climatic period SB.

TA-1220. Sudoble **3930 ± 80**

Dy from depth 280–300cm. Climatic period SB.

TA-1221. Sudoble **4960 ± 70**

Dy from depth 380–400cm. Beginning of climatic period SB.

TA-1222. Sudoble **5950 ± 80**

Dy from depth 485–500cm. Climatic period AT.

TA-1223. Sudoble **8510 ± 70**

Dy from depth 580–600cm. Boundary of climatic periods BO and AT.

TA-1224. Sudoble **9080 ± 90**

Sapropel from depth 680–700cm. Basal layers of climatic period BO.

TA-1225. Sudoble **11,160 ± 100**

Sapropel with slight admixture of lake lime from depth 770–790cm. Climatic period AL.

TA-1226. Sudoble **11,550 ± 100**

Peat with admixtures of lake lime and macroparticles of wood from depth 875–885cm. Climatic period AL.

Kobuzi series

Kobuzi bog lies in Vilei dist, 400 m N of Kobuzi village. Samples coll and subm 1979 by I I Bogdel.

TA-1369. Kobuzi **730 ± 60**

Peat with undecayed vegetal remains from depth 22–28cm.

TA-1368. Kobuzi **1440 ± 70**

Same type, from depth 28–35cm.

TA-1367. Kobuzi **2750 ± 70**

Same type, from depth 50–55cm.

TA-1366. Kobuzi **4320 ± 70**

Same type, from depth 75–80cm.

TA-1365. Kobuzi **6050 ± 60**

Same type, from depth 100–105cm.

TA-1364. Kobuzi **7650 ± 70**

Peat from depth 125–130cm. Color of peat turns into light brown.

TA-1331. Kobuzi **8760 ± 70**

Peat from depth 150–155cm. Color of peat turns into yellowish brown.

TA-1330. Kobuzi **8730 ± 70**

Peat from depth 175–180cm.

TA-1329. Kobuzi **9640 ± 90**

Peat with slightly decayed woody remains from depth 225–230cm.

TA-1326. Kobuzi **9550 ± 80**

Wood "A" from depth 240cm.

TA-1327. Kobuzi **10,430 ± 90**

Wood "B" from depth 240cm, from layer where partly decayed wood from trunks, roots and branches were collected.

TA-1328. Kobuzi **9530 ± 80**

Forest peat from depth 250–255cm.

TA-1325. Kobuzi **10,430 ± 90**

Forest peat from depth 275–280cm.

TA-1324. Kobuzi **11,200 ± 90**

Peat with sand from depth 295–300cm.

Georgian SSR

Anaklija series

Dates of lake and bog sediments reported below refer to complex study of Inguri River basin, W Georgia. Samples coll and subm 1981 by L R Serebryannyi, Inst Geography, Tartu (Serebryannyi *et al* 1984).

TA-1303. Anaklija **3090 ± 100**

Peat from depth 217–220cm. Base of Pollen Zone SB2.

TA-1301. Anaklija **4090 ± 90**

Peat from depth 315–320cm. Pollen Zone SB1.

TA-1300. Anaklija **4530 ± 70**

Peat from depth 380–385cm. Pollen Zone SB1.

TA-1299. Anaklija **4570 ± 70**

Peat from depth 530–535cm. Pollen Zone AT2.

TA-1298. Anaklija **5640 ± 100**

Peat from depth 625–632cm. Pollen Zone AT2.

Hungarian PR

Lovaszberen

Sample from buried soil from Lovaszberen loess, Hungary, site with coordinates (47°18′N, 18°33′E). In 1977 while examining the section, numerous large charcoal fragments were observed (Ilves, Pecsi & Serebryannyi 1980). Sample subm 1977 by M Pecsi, Hungarian Acad Sciences.

TA-1196. Lovaszberen **20,220 ± 300**

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