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TARTU RADIOCARBON DATES VIII

E ILVES

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The present list includes 66 dates of geologic samples determined using the liquid-scintillation ^{14}C metod at the Geobiochemical Laboratory of the Institute of Zoology and Botany, Academy of Sciences, Estonian SSR. Benzene synthesized from wood dating from 1850 ± 10 yr served as a reference standard. All radiocarbon dates have been calculated using 5568 ± 30 yr before AD 1950 as the half-life of ^{14}C.

Senno Bog series

Senno bog lies in Pskov region, 5km SW of Izborsk RR Sta. Sample coll 1970 by E Ilves, A Sarv, and T Rinne; pollen analyses by A Sarv.

TA-460. Senno **1580 ± 60**

Sphagnum peat from depth 60 to 70cm. Pollen Zone SA2.

TA-454. Senno **1970 ± 60**

Phragmites peat from depth 90 to 100cm. Boundary of Pollen Zones SA1 and SA2.

TA-455. Senno **3220 ± 60**

Phragmites peat from depth 160 to 170cm. Sub-Boreal and Sub-Atlantic contact.

TA-456. Senno **3750 ± 70**

Phragmites peat with admixture of lake lime from depth 190 to 200cm. Transition from lake stage to swamp.

TA-461. Senno **5090 ± 70**

Lake lime with mollusk shells from depth 200 to 210cm. Pollen Zone AT2.

TA-457. Senno **6660 ± 90**

Lake lime with mollusk shells from depth 250 to 260cm. Boreal-Atlantic contact.

TA-519. Senno **7300 ± 70**

Lake lime with mollusk shells from depth 260 to 270cm. Boundary of Pollen Zones BO2 and BO1. Empirical boundary of spruce pollen, rational boundary of alder and broad-leaved tree pollen.

TA-458. Senno **9070 ± 90**

Sapropel with admixture of lake lime from depth 280 to 290cm. Pre-Boreal and Boreal contact.

TA-459. Senno **9430 ± 90**

Sapropel with plant remains (reed) and with admixture of sand from depth 290 to 300cm. Dryas and Pre-Boreal contact.

Mõksi Bog series

Mõksi bog lies 3km SW of Kilingi-Nõmme, in SW of Estonian SSR. Sample coll 1970 by E Ilves, A Sarv and T Rinne. Pollen analyses by A Sarv, botanic determination by M Ilomets (Sarv & Ilves, 1976).

TA-404. Mõksi **1730 ± 50**

Sphagnum peat from depth 170 to 180cm. Boundary of Pollen Zones SA1 and SA2.

TA-405. Mõksi **2750 ± 60**

Sphagnum peat from depth 320 to 330cm. Sub-Boreal and Sub-Atlantic contact.

TA-406. Mõksi **2990 ± 60**

Sphagnum peat from depth 390 to 400cm. Pollen Zone SB2. Culmination of spruce pollen.

TA-407. Mõksi **4220 ± 60**

Sphagnum peat from depth 450 to 460cm. Pollen Zone SB1.

TA-408. Mõksi **6100 ± 70**

Peat-like sapropel from depth 570 to 580cm. Pollen Zone AT2. Rational boundary of spruce pollen.

TA-409. Mõksi **8160 ± 80**

Sapropel from depth 630 to 640cm. Boundary of Pollen Zones BO1 and BO2.

Kõivasoo Bog series

Kõivasoo bog is in S of Kõpu peninsula, Hiiumaa Dist, Estonian SSR. Thickness of peat 1.8m, thickness of lake sediments is 1.2m. Sample coll 1972 by E Ilves and A Sarv. Pollen analyses by A Sarv, diatomic analyses by M Pork.

TA-523. Kõivasoo **1060 ± 60**

Sphagnum cuspidatum peat from depth 0 to 10cm.

TA-524. Kõivasoo **2440 ± 60**

Sphagnum peat of transition type from depth 50 to 60cm. Pollen Zone SB2, 10cm above Sub-Boreal and Sub-Atlantic contact.

TA-525. Kõivasoo **4360 ± 60**

Sphagnum peat of fen type from depth 100 to 110cm. Pollen Zone SB1. Rational boundary of spruce pollen.

TA-526. Kõivasoo **4860 ± 70**

Sapropel from depth 180 to 190cm. Atlantic and Sub-Boreal contact. Empirical boundary of spruce pollen. Transition from lake stage to swamp.

TA-527. Kõivasoo **6580 ± 60**

Detritus sapropel from depth 200 to 210cm. Boundary of Pollen Zones AT1 and AT2.

TA-528. Kõivasoo **7440 ± 60**

Lake lime from depth 220 to 230cm. Pollen Zone AT1. Empirical boundary of oak and linden pollen. End of lake lime sedimentation.

TA-529. Kõivasoo **7850 ± 70**

Lake lime from depth 230 to 240cm. Boreal and Atlantic contact.

TA-530. Kõivasoo **8190 ± 90**

Lake lime from depth 270 to 280cm. Boundary of Pollen Zones BO2 and BO1. Rational boundary of alder and elm pollen.

Nigula Bog series

Nigula bog lies at SW border of coastal region of Estonian SSR, 35km S of Pärnu and 10km E of coast of Riga Bay. Bog stretches in N-S direction with length ca 9km and width 3 to 4km. W from longitudinal axis of bog rise 5 islets covered with wood flora. In general, mire sites of raised bog type are characteristic of this bog. Sample coll 1973 by E Ilves and A Sarv from E (Nigula 1) and W (Nigula 2) parts of mire complex. Pollen analysis by A Sarv, botanic determination by M Ilomets (Sarv & Ilves, 1976).

TA-562. Nigula 1 **1240 ± 60**

Complex emerged peat from depth 100 to 110cm. Pollen Zone SA2.

TA-790. Nigula 1 **2150 ± 70**

Complex emerged peat and Sphagnum cuspidatum peat from depth 160 to 170cm. Pollen Zone SA1.

TA-555. Nigula 1 **2820 ± 70**

Sphagnum and Eriophorum vaginatum peat from depth 220 to 230cm. Sub-Boreal and Sub-Atlantic contact.

TA-556. Nigula 1 **3480 ± 80**

Complex emerged peat from depth 280 to 290cm. Pollen Zone SB2.

TA-791. Nigula 1 **3900 ± 70**

Complex emerged peat from depth 320 to 330cm. Pollen Zone SB1.

TA-557. Nigula 1 **3960 ± 80**

Complex emerged peat from depth 340 to 350cm. Pollen Zone SB1.

TA-558. Nigula 1 **4330 ± 60**

Eriophorum-Scheuchzeria peat from depth 460 to 470cm. Pollen Zone SB1. Culmination of oak pollen.

TA-559. Nigula 1 **4720 ± 80**

Sedge-forest peat from depth 470 to 480cm. Atlantic and Sub-Boreal contact.

TA-566. Nigula 1 **6230 ± 70**

Eriophorum and Phragmites peat (contact) from depth 510 to 520cm. Pollen Zone AT2. Culmination of elm pollen.

TA-560. Nigula 1 **7040 ± 80**

Phragmites peat from depth 520 to 530cm. Pollen Zone AT1. Rational boundary of linden pollen.

TA-561. Nigula 1 **7840 ± 80**

Sapropel from depth 580 to 590cm. Boreal and Atlantic contact. Rational boundary of elm pollen.

TA-654. Nigula 2 **580 ± 60**

Woodland and wet pine peat from depth 50 to 60cm. Pollen Zone SA3.

TA-788. Nigula 2 **1100 ± 60**

Sphagnum fuscum peat from depth 120 to 130cm. Boundary of Pollen Zones SA2 and SA3.

TA-655. Nigula 2 **1430 ± 60**

Sphagnum fuscum peat from depth 160 to 170cm. Pollen Zone SA2. Culmination of spruce pollen.

TA-789. Nigula 2 **1420 ± 60**

Sphagnum fuscum peat from depth 200 to 210cm. Pollen Zone SA2.

TA-656. Nigula 2 **2130 ± 70**

Sphagnum fuscum peat from depth 240 to 250cm. Pollen Zone SA1.

TA-657. Nigula 2 **2410 ± 70**

Eriophorum with *Sphagnum fuscum* peat from depth 320 to 330cm. Pollen Zone SA1.

TA-658. Nigula 2 **2550 ± 70**

Eriophorum with *Sphagnum fuscum* peat from depth 350 to 360cm. Pollen Zone SA1.

TA-659. Nigula 2 **2950 ± 70**

Eriophorum with *Sphagnum fuscum* peat from depth 390 to 400cm. Pollen Zone SB2. Culmination of spruce pollen.

TA-660. Nigula 2 **3670 ± 70**

Sphagnum fuscum and *Eriophorum* peat (contact) from depth 430 to 440cm. Boundary of Pollen Zones SB1 and SB2.

TA-661. Nigula 2 **4870 ± 70**

Eriophorum peat from depth 480 to 490cm. Atlantic and Sub-Boreal contact.

TA-692. Nigula 2 **6190 ± 80**

Eriophorum peat from depth 540 to 550cm. Pollen Zone AT2. Rational boundary of spruce.

TA-662. Nigula 2 **6320 ± 80**

Eriophorum with *Sphagnum fuscum* peat from depth 570 to 580cm. Pollen Zone AT1. Culmination of elm pollen. Empirical boundary of spruce pollen.

TA-663. Nigula 2 **7150 ± 80**

Carex-Sphagnum peat from depth 640 to 650cm. Pollen Zone BO2. Rational boundary of alder pollen. Beginning of swamp formation.

TA-665. Nigula 2 **7770 ± 80**

Sapropel from depth 690 to 700cm. Pollen Zone BO2. Beginning of organic deposits.

Zosu Bog series

Zosu bog lies at W part of Luban plain, Latvian SSR, 5km E of Aickuja. Average thickness of organogenic deposits, 3m. Samples coll 1975 and subm by L Medne, botanic analyses by L Medne and A Guzlen, Latvian State Univ.

TA-881. Zosu **1820 ± 60**

Complex peat from depth 10 to 15cm. Pollen Zone SA2.

TA-880. Zosu **2210 ± 60**

Sphagnum medium peat from depth 30 to 35cm. Pollen Zone SA2.

TA-922. Zosu **2470 ± 70**

Sphagnum peat from depth 40 to 45cm. Boundary of Pollen Zones SA1 and SA2.

TA-921A. Zosu **4160 ± 70**

Forest mesotrophic peat from depth 60 to 65cm. Pollen Zone AT2.

TA-921B. Zosu **4570 ± 70**

Wood from depth 60 to 65cm.

TA-879. Zosu **5620 ± 70**

Forest mesotrophic peat from depth 85 to 90cm. Pollen Zone AT2.

TA-897. Zosu **6060 ± 70**

Forest sedge peat from depth 100 to 105cm. Pollen Zone AT2.

TA-898. Zosu **6560 ± 80**

Forest sedge peat from depth 125 to 130cm. Boundary of Pollen Zones AT1 and AT2.

TA-899. Zosu **7100 ± 80**

Forest sedge peat from depth 145 to 150cm. Pollen Zone AT1.

TA-900. Zosu **7450 ± 70**

Forest sedge peat from depth 180 to 185cm. Boreal and Atlantic contact.

TA-923. Zosu **7700 ± 70**

Forest sedge peat from depth 210 to 215cm. Boundary of Pollen Zones BO1 and BO2.

TA-878. Zosu **8160 ± 80**

Forest sedge peat from depth 220 to 225cm. Pollen Zone BO1. Boreal maximum of spruce pollen.

TA-877A. Zosu **8550 ± 80**

Forest sedge peat from depth 260 to 265cm. Pollen Zone BO1.

TA-877B. Zosu **8700 ± 80**

Repeat dating.

TA-876A. Zosu **8400 ± 80**

Forest sedge peat from depth 290 to 295cm. Pre-Boreal and Boreal contact.

TA-876B. Zosu **8360 ± 70**

Repeat dating.

TA-875. Zosu **8020 ± 80**

Sapropel from depth 295 to 300cm.

Reference

Sarv, A A and Ilves, E O, 1976, Stratigraphy and geochronology of Holocene lake and mire deposits from the southwestern part of Estonia (in Russian), *in*: Palynology in continental and marine geological investigations: Riga, p 47-59.