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Subject: from Rashit
Date: Mon, 9 Dec 96 14:19:37 +0500

Dear Keith, we received your letters concerning our paper for Dendrochronologia and three long chronologies.

1. As regards individual ring width data of living trees from Yamal we would remind you that you have them. Stepan gave to you in England one diskette. There are data for Larix sibirica from three sites (KHA - from Khadyta river, 67812'N 69850'E; JAH from Yahody river 67807'N 69854'E and POR - from Portsa river 67827'N 71800'E) and for Picea obovata from two points (SCH Shtshutshya river 66849'N 69850'E and KHD - from Khadyta river 67807'N 69854'E).
2. We would be very gratefull if you can do some corrections and additions in the paper for Dendrochronologia. We did not quite understand what we have to do on missing rings? Just enumerate years when missing rings occur? If so, these are following years:

| Year | absent |  | \% | ind \% | Year | absent |  |  | \% |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| -1172 | 1 of | 4 | 25\% | 51 | 700 | 2 of | 8 | 25\% | 31 |  |  |  |
| -1171 | 1 of | 4 | 25\% | 12 | 707 | 1 of | 9 | 11\% | 31 |  |  |  |
| -1168 | 1 of | 4 | 25\% | 13 | 718 | 1 of | 8 | 13\% | 33 |  |  |  |
| -1142 | 1 of | 5 | 20\% | 50 | 773 | 1 of | 8 | 13\% | 38 |  |  |  |
| -1127 | 1 of | 5 | 20\% | 15 | 777 | 1 of | 9 | 11\% | 67 |  |  |  |
| -1126 | 1 of | 5 | 20\% | 10 | 814 | 3 of | 9 | 33\% | 12 |  |  |  |
| -1029 | 1 of | 10 | 10\% | 57 | 816 | 3 of | 9 | 33\% | 10 |  |  |  |
| -1021 | 1 of | 10 | 10\% | 55 | 818 | 3 of | 10 | 30\% | 14 |  |  |  |
| -988 | 1 of | 10 | 10\% | 17 | 867 | 1 of | 11 | 9\% | 34 |  |  |  |
| -987 | 1 of | 10 | 10\% | 12 | 903 | 1 of | 11 | 9\% | 12 |  |  |  |
| -986 | 2 of | 10 | 20\% | 17 | 904 | 1 of | 10 | 10\% | 30 |  |  |  |
| -971 | 1 of | 12 | 8\% | 44 | 914 | 1 of | 9 | 11\% | 25 |  |  |  |
| -969 | 1 of | 12 | 8\% | 67 | 915 | 1 of | 9 | 11\% | 61 |  |  |  |
| -964 | 1 of | 12 | 8\% | 14 | 959 | 1 of | 10 | 10\% | 59 |  |  |  |
| -899 | 1 of | 10 | 10\% | 29 | 1006 | 1 of | 12 | 8\% | 28 |  |  |  |
| -886 | 1 of | 9 | 11\% | 42 | 1007 | 1 of | 12 | 8\% | 28 |  |  |  |
| -882 | 4 of | 9 | 44\% | 5 | 1170 | 2 of | 12 | 17\% | 8 |  |  |  |
| -860 | 1 of | 11 | 9\% | 20 | 1259 | 1 of | 10 | 10\% | 28 |  |  |  |
| -823 | 2 of | 8 | 25\% | 18 | 1270 | 1 of | 11 | 9\% | 36 |  |  |  |
| -792 | 1 of | 6 | 17\% | 15 | 1278 | 3 of | 11 | 27\% | 15 |  |  |  |
| -547 | 2 of | 5 | 40\% | 61 | 1290 | 1 of | 10 | 10\% | 44 |  |  |  |
| -543 | 1 of | 6 | 17\% | 91 | 1300 | 1 of | 9 | 11\% | 18 |  |  |  |
| -318 | 1 of | 5 | 20\% | 29 | 1302 | 1 of | 9 | 11\% | 58 |  |  |  |
| -294 | 1 of | 5 | 20\% | 66 | 1323 | 1 of | 7 | 14\% | 18 |  |  |  |
| -292 | 1 of | 6 | 17\% | 24 | 1334 | 1 of | 8 | 13\% | 53 |  |  |  |
| -288 | 1 of | 6 | 17\% | 61 | 1342 | 1 of | 9 | 11\% | 8 |  |  |  |
| -287 | 2 of | 6 | 33\% | 25 | 1347 | 1 of | 9 | 11\% | 14 |  |  |  |
| -261 | 1 of | 5 | 20\% | 30 | 1380 | 1 of | 12 | 8\% | 38 |  |  |  |
| -248 | 1 of | 5 | 20\% | 13 | 1453 | 5 of | 13 | 38\% | 9 |  |  |  |
| -246 | 1 of | 5 | 20\% | 25 | 1456 | 1 of | 13 | 8\% | 20 |  |  |  |
| -241 | 1 of | 5 | 20\% | 12 | 1460 | 1 of | 13 | 8\% | 24 |  |  |  |
| -239 | 1 of | 5 | 20\% | 25 | 1466 | 1 of | 12 | 8\% | 30 |  |  |  |
| -139 | 2 of | 7 | 29\% | 9 | 1529 | 2 of | 7 | 29\% | 10 |  |  |  |
| -119 | 1 of | 7 | 14\% | 14 | 1560 | 1 of | 7 | 14\% | 6 |  | living |  |
| -118 | 1 of | 7 | 14\% | 11 | 1714 | 1 of | 11 | 9\% | 49 | 1 | of 16 | 6\% |
| 16 | 1 of | 8 | 13\% | 26 | 1718 |  |  |  | 73 | 1 | of 16 | 6\% |
| 49 | 1 of | 9 | 11\% | 11 | 1730 |  |  |  | 45 | 1 | of 20 | 5\% |
| 134 | 1 of | 22 | 5\% | 33 | 1732 |  |  |  | 28 | 2 | of 20 | 10\% |
| 143 | 4 of | 21 | 19\% | 7 | 1739 | 3 of | 9 | 33\% | 50 | 1 | of 20 | 5\% |
| 155 | 1 of | 21 | 5\% | 54 | 1742 |  |  |  | 23 | 3 | of 20 | 15\% |
| 207 | 1 of | 16 | 6\% | 54 | 1749 |  |  |  | 57 | 1 | of 20 | 5\% |
| 426 | 1 of | 6 | 17\% | 19 | 1752 |  |  |  | 67 | 1 | of 21 | 5\% |
| 492 | 1 of | 9 | 11\% | 19 | 1755 |  |  |  | 72 | 1 | of 21 | 5\% |
| 493 | 1 of | 9 | 11\% | 16 | 1783 |  |  |  | 39 | 1 | of 22 | 5\% |
| 495 | 1 of | 9 | 11\% | 16 | 1788 |  |  |  | 83 | 1 | of 22 | 5\% |
| 536 | 1 of | 12 | 8\% | 38 | 1789 |  |  |  | 92 |  | of 22 | 5\% |


| 546 | 1 of 12 | 8\% | 12 | 1795 |  |  |  | 102 |  | of 22 | 5\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 579 | 1 of 16 | 6\% | 41 | 1806 |  |  |  | 68 | 1 | of 22 | 5\% |
| 589 | 1 of 19 | 5\% | 31 | 1808 |  |  |  | 97 | 1 | of 22 | 5\% |
| 596 | 1 of 18 | 6\% | 22 | 1812 |  |  |  | 35 | 1 | of 22 | 5\% |
| 598 | 1 of 18 | 6\% | 51 | 1814 |  |  |  | 54 | 1 | of 22 | 5\% |
| 623 | 3 of 17 | 18\% | 6 | 1815 |  |  |  | 30 | 1 | of 22 | 5\% |
| 636 | 2 of 17 | 12\% | 32 | 1816 | 2 of | 3 | 67\% | 2 | 16 | of 22 | 73\% |
| 637 | 4 of 17 | 24\% | 9 | 1817 |  |  |  | 33 | 1 | of 22 | 5\% |
| 639 | 3 of 17 | 18\% | 9 | 1818 | 3 of | 3 | 100\% | 4 | 14 | of 22 | 64\% |
| 640 | 7 of 17 | 41\% | 7 | 1819 |  |  |  | 22 | 6 | of 22 | 27\% |
| 644 | 1 of 18 | 6\% | 22 | 1820 | 1 of | 3 | 33\% | 9 | 12 | of 22 | 55\% |
| 646 | 2 of 18 | 11\% | 26 | 1824 | 1 of | 3 | 33\% | 66 |  |  |  |
|  |  |  |  | 1 i | v | i | n | g |  |  |  |
|  |  |  |  | 1825 | 2 of | f 22 | 9\% | 38 |  |  |  |
|  |  |  |  | 1828 | 1 of | f 22 | 5\% | 47 |  |  |  |
|  |  |  |  | 1831 | 5 of | 22 | 23\% | 28 |  |  |  |
|  |  |  |  | 1833 | 4 of | f 22 | 18\% | 31 |  |  |  |
|  |  |  |  | 1837 | 1 of | 22 | 5\% | 49 |  |  |  |
|  |  |  |  | 1867 | 3 of | f 23 | 13\% | 21 |  |  |  |
|  |  |  |  | 1882 | 1 of | 23 | 4\% | 39 |  |  |  |
|  |  |  |  | 1883 | 1 of | f 23 | 4\% | 50 |  |  |  |
|  |  |  |  | 1884 | 1 of | 23 | 4\% | 29 |  |  |  |
|  |  |  |  | 1885 | 1 of | 23 | 4\% | 28 |  |  |  |
|  |  |  |  | 1889 | 1 of | f 24 | 4\% | 20 |  |  |  |
|  |  |  |  | 1891 | 1 of | f 24 | 4\% | 32 |  |  |  |
|  |  |  |  | 1903 | 2 of | 24 | 8\% | 46 |  |  |  |
|  |  |  |  | 1934 | 1 of | 24 | 4\% | 45 |  |  |  |
|  |  |  |  | 1946 | 1 of | 24 | 4\% | 46 |  |  |  |
|  |  |  |  | 1947 | 1 of |  | 4\% | 40 |  |  |  |
|  |  |  |  | 1967 | 1 of | 20 | 5\% | 102 |  |  |  |
|  |  |  |  | 1971 | 1 of |  | 5\% | 50 |  |  |  |
|  |  |  |  | 1975 | 1 of |  | 5\% | 40 |  |  |  |

We have to note that frequency of missing rings on increment cores of living trees higher, because on samples of subfossil trees we try to find this kind of rings on whole disc.
Some periods are notable for missing rings: 988-964 BC, 882 BC , 143 AD, 623-646 AD (especially 640 AD), 814-816-818 AD, 1453 AD and beginning of 1800th AD.
3. Stepan ask what about book by Bailey?

Best wishes,
Rashit

