|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Esteban et al. (2004) | Features / Fossil species | *Cedroxylon shakhtnaense* comb. nov. | 6. *Abies* sect. *Pseudopicea*  Hickel emend. Q. P. Xiang  \_ Type: *Abies spectabilis*  (D. Don) Spach | *A.*  *chensiensis*  Van Tieghem | *A. fabri*  (Masters) Craib | *A. firma* Sieb.&Zucc. (microscopic observation) | *A. forrestii*  Coltm.‐ Rogers | *A.*  *holophylla*  Maxim. | *A.*  *homolepis*  Sieb. & Zucc. | *A. pindrow*  Royle |
| AT1 | Well‐defined growth rings | + | + | + | + | + | + | + | + | + |
| AT4 | Axial tracheids of  polygonal section | + | + | + | + | + | + | + | + | + |
| AT6 | Intercellular spaces  present | + | + | ‐ | ‐ | ‐ | + | ‐ | ‐ | + |
| AT8 | Spiral thickenings present, but not  in all the axial tracheids | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT9 | Bordered pits present on the  tangential walls  of the axial tracheids | + | + | + | + | ‐ | + | + | + | + |
| AT10 | Uniseriate bordered pits on the  radial walls  of the axial tracheids | + | + | + | + | + | + | + | + | + |
| AT11 | Biseriate bordered pits on the  radial walls of the axial tracheids | (occasionally) | ‐ | ‐ | ‐ | + | ‐ | + | ‐ | ‐ |
| AT19 | Bars of Sanio | + | ‐ | ‐ | ‐ | + | ‐ | + | ‐ | ‐ |
| AT20 | Trabecula | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| AT21 | Crystals present in axial  tracheids | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| P1 | Axial parenchyma  absent or scarce | + | + | ‐ | ‐ | + | + | + | + | + |
| P2 | Axial parenchyma with smooth transverse walls | + | ‐ | ‐ | + | ‐ | + | ‐ | + | ‐ |
| P3 | Axial parenchyma with nodular transverse walls | + | + | + | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| P4 | Axial parenchyma with crystals | ‐ | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| P5 | Axial parenchyma  with resin | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| P6 | Diffuse axial  parenchyma present | + | + | + | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| P8 | Terminal axial  parenchyma present | + / ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ |
| R1 | Uniseriate rays | + | + | + | + | + | + | + | + | + |
| R2 | Partially biseriate rays | (in less than 10% of the total number of the rays) | + | + | + | + | ‐ | ‐ | ‐ | ‐ |
| R4 | Ray height from 1 to 15 cells | + | + | + | + | + | + | + | + | + |
| R5 | Ray height from 16 to 30 cells | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| R7 | Number of rays per mm2 <70 | + | + | ‐ | ‐ | + | ‐ | ‐ | ‐ | + |
| R8 | Number of rays per mm2 between  70‐100 | ‐ | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| R9 | Number of rays per mm2 >70 | ‐ | ‐ | ‐ | + | ‐ | ‐ | + | + | ‐ |
| R16 | Ray parenchyma with  smooth axial walls | + | ‐ | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| R17 | Ray parenchyma with  nodular axial walls | + | + | ‐ | + | + | + | + | + | + |
| R19 | Ray parenchyma with pitted horizontal walls | + | + | + | + | + | + | + | + | + |
| R20 | Ray parenchyma with  crystals | ‐ | ‐ | ‐ | ‐ | + | ‐ | + | ‐ | ‐ |
| R22 | Pinoid cross field pits | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ | ‐ | ‐ |
| R23 | Piceoid cross field pits | + | + | + | + | + | ‐ | + | + | + |
| R24 | Cupressoid cross field  pits | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| R25 | Taxodioid cross field  pits | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | + | ‐ |
| R26 | 1 to 2 pits per cross  field | + | + | + | + | + | + | + | + | + |
| R27 | 3 to 4 pits per cross  field | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC1 | Resin canals absent | + | + | + | + | + | + | + | + | + |
| RC3 | Thick‐walled epithelial cell  resin canals | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC4 | Number of epithelial cells in the  axial resin canals <9 | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |
| RC5 | Number of epithelial cells in the  axial resin canals > 9 | + | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ | ‐ |