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## **Black Knot** (DIBOTRYON MORBOSUM)

BLACK KNOT IS A TERMINAL FUNGUS THAT ONLY AFFECTS PRUNUS SPECIES OF TREES SPECIFICALLY MAYDAY AND SCHUBERT CHOKE CHERRY TREES. AMUR CHOKE CHERRY IS IN THIS FAMILY BUT IS TYPICALLY BLACK KNOT RESISTANT AND IS UNCOMMON FOR AN AMUR TO CONTRACT IT. BLACK KNOT IS SPREAD BY THE WIND BECAUSE IT'S A SPORE. ONCE BLACK KNOT (BK) SETTLES INTO A TREE IT'S THERE FOR THE LIFE OF THE TREE UNTIL THE IMMUNE SYSTEM OF THE TREE CAN'T FIGHT IT OFF ANYMORE OR IMPROPER PRUNING IS DONE, AND IT TAKES THE LIFE OF THE TREE. BK COMES OUT OF DORMANCY IN APRIL WHEN HUMIDITY RISES WITH A BIT OF WARM AIR OR WE GET A SHOWER. IS ACTIVE UNTIL LATE FALL SOMETIME, SEPTEMBER INTO OCTOBER, DEPENDING ON THE WEATHER.

**THE RULES:** IF YOU WANT TO KEEP YOUR TREE FOR AS LONG AS POSSIBLE YOU SHOULD FOLLOW PRUNING METHODS TO THE LIFE CYCLE OF BK AND MANIPULATE TRANSPIRATIONAL PULL OF THE TREE. 1. NEVER PRUNE THE TREE WITH LEAVES ON IT. WAIT UNTIL THE LEAVES START TO DROP OFF IN THE FALL, MID OCT IS OPTIMAL AND TO THE END OF NOVEMBER IS BEST. YOU CAN TRIM BEFORE APRIL 1<sup>ST</sup> BUT FALL TIME IS BEST. 2. MAKE PRUNING CUT 12-16 INCHES BEFORE THE KNOT OR THE TAKE OFF THE WHOLE BRANCH IF A BLACK DOT IS NOTICED IN THE WOOD TISSUE AFTER THE FIRST PRUNING CUT. 3. PROPER PRUNING CUTS MUST BE MADE. THIS IS SO THE TREE CAN COMPARTMENTALIZE (HEAL) PROPERLY. 4. LEAVE THE TREE THICK AND FULL, ONLY REMOVING BRANCHES FOR CLEARANCES, THE KNOTS AND DEADWOOD. 5. DISINFECT PRUNING TOOLS AFTER EVERY CUT IF YOU TRIM IN OCTOBER OR MARCH. 6. DONT' TOP THE TREE AS A MEANS TO "CONTROL" BLACK KNOT, THIS KILLS THE TREE FASTER AND BRINGS ON BK FULL FORCE.

**WHY:** WE CAN'T PREDICT WHAT BRANCH BK WILL MAKE A BLOOM ON NEXT SEASON. IF YOU PRUNE YOUR TREE AND TAKE BRANCHES OFF WITH NO BK, THEN YOU END UP PRUNING YOURSELF OUT OF A TREE. THE MORE BRANCHES THE TREE HAS, THE MORE BRANCHES IT HAS TO SURVIVE BK WITH. ALWAYS PRUNE WHEN THE LEAVES ARE OR MOSTLY OFF BECAUSE THIS MEANS THE TREE ISN'T MOVING IT'S SAP AS FAST, IT IS GOING DORMANT AND SO IS BK. THE BK SPORES IN THE SAP ARE CUT OFF AT A CRUTIAL TIME, BEFORE THE TREE GOES FULLY DORMANT AND BK IS NOT IN THE AIR TO INFECT THE FRESH PRUNING CUT. **SOME SCIENCE:** TREES ARE AUTONOMOUS, THEY STORE ENERGY IN ALL IT'S LOCATIONS IT'S MADE, NOT ALL IS EXPORTED TO THE ROOTS. USING THAT INFORMATION IN STOPPING BK FROM BEING DRAWN TOWARD THE TRUNK IS HOW YOU GET THE MOST YEARS OUT OF YOUR TREE. THEREFORE, SPREADING IT TO THE PRUNING CUTS IS SIGNIFICANTLY REDUCED OR NOT SPREAD AT ALL . ALSO, YOU CAN SEE EVERY KNOT BETTER SO YOU ARE ABLE TO REMOVE EVERY ONE. I FIND LATE SEPTEMBER TO END OF NOVEMBER ARE MY FAVORITE TIMES TO TRIM BK. BY DECEMBER THE TREE IS FULLY DORMANT, ANY KNOTS STILL ON THE TREE DRAWS THE BK SPORES INTO THE SAP PULLING IT DOWN INTO THE TRUNK AND ROOTS, MOVING THE BK INWARD WHICH REDUCES IT'S YEARS. THE GOAL WHEN PRUNING BK IS TO KEEP IT OUT ON THE TIPS OF THE BRANCHES FOR AS LONG AS POSSIBLE. IT'S STILL WISE TO DISINFECT THE PRUNING TOOL THOUGH JUST TO BE ON THE SAFE SIDE, BUT YOU DON'T HAVE TO BE METICULOUS WITH IT. IF YOU PRUNE THE TREE WITH LEAVES ON, EVEN IF YOU DISINFECT THE TOOL AFTER EVERY CUT AND FOLLOW PROPER PRUNING HABITS, BK IS AIRBORNE AND THE PRUNING CUTS MAKE FRESH ENTRY POINTS FOR IT TO GET INTO THE TREE. THE ONLY WAY TO STOP BK FROM GETTING INTO A FRESH PRUNE CUT, WHILE THE TREE IS ACTIVE, WOULD BE TO IMMEDIATELY COVER THE CUT WITH PURE BEES WAX.

BLACK KNOT IS NOT SOMETHING WE CAN STOP, IT'S HERE AND IT'S NOT GOING ANYWHERE. ARE YOU HARBORING A DISEASED TREE? No, 99.9% OF MAYDAY AND SCHUBERT TREES IN ALBERTA, SASKATCHEWAN, MANITOBA AND THE NORTHERN AMERICAN STATES HAVE BK. MOST CITIES AND TOWNS DON'T BOTHER WITH IT ANYMORE BECAUSE WE CAN'T ERADICATE IT. TO ERADICATE IT EVERY MAYDAY AND SCHUBERT IN THE PRAIRIES WOULD HAVE TO BE REMOVED AND NONE PLANTED FOR A FEW YEARS.

BUT, IF YOU FOLLOW THESE RULES YOU CAN GET MORE YEARS OUT OF YOUR TREE THEN BY NOT FOLLOWING THEM. HOW MANY YEARS? DEPENDS ON THE TREE. I'VE SEEN BK TAKE A TREE IN 1 YEAR AND I HAVE A FEW I'VE BEEN PRUNING FOR 10 AND THEIR STILL CHIMING ON. MOST SEEM TO LIVE 5-15 YEARS (ISH), WITH BK.

IF YOUR TREE HAS A BLISTER ON A MAIN STEM OR ON THE TRUNK DON'T PANIC, THE TREE ISN'T NECESSARILY A REMOVAL. TREES CAN LIVE SEVERAL YEARS WITH A BLISTER ON THE TRUNK OR A MAIN STEM. I WILL REMOVE A STEM IF THE KNOT IS REALLY CLOSE TO THE TRUNK OR ISN'T A BIG PART OF THE CANOPY. I ALSO RECOMMEND DEEP ROOT FERTILIZING YOUR TREE EVERY SPRING TO HELP IT FIGHT BK FROM WITHIN AND GIVE IT MORE YEARS.

I HOPE YOU FIND THIS INFORMATION USEFUL. IF YOU HAVE ANY QUESTIONS OR NEED MORE ADVICE PLEASE REACH OUT TO DI.

