

STREAM KILLER

What kind of water pollution has hurt more miles of streams in Pennsylvania than any other?

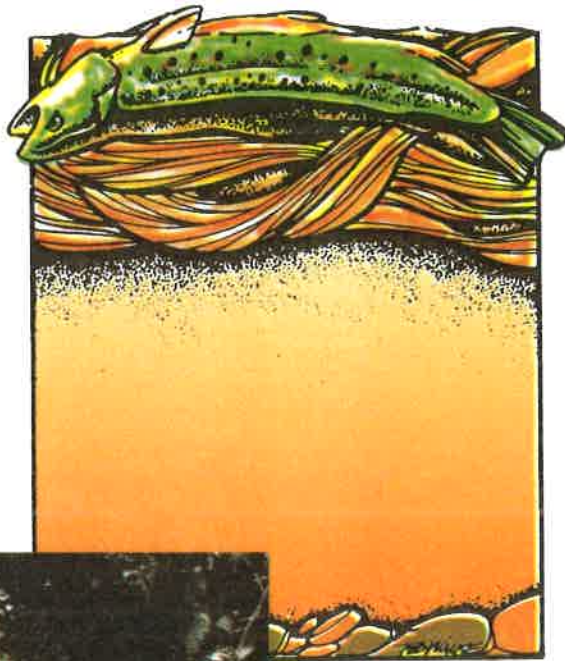
Acid rain? Pollution from industries? The washing away of fertilizers and chemicals from farms?

No, no, no!

The worst offender of water quality in Pennsylvania has been acid mine drainage.

What in the world is that?

Acid mine drainage is the name given to a big problem caused by coal mines. Coal has long been mined and used to heat homes and provide power for



industry. Today, coal is burned to make electricity and steel.

Coal is made mainly of carbon, an element. Millions of years ago, swamps like the Everglades covered much of Pennsylvania. The plants there grew and died, grew and died, grew and died. Over many, many thousands of years, these dead plants built up and formed a layer. Other kinds of materials built up on top, pressing down on the dead plant material. The pressure on top of the dead plant material was tremendous! After millions of years, the plants changed into coal.

Coal is found near the surface of the ground or deep underground. Usually, there are other things mixed in with coal. Sometimes, fool's gold,

or iron pyrite (pronounced pie-right), is found with it. When coal mining uncovers pyrite, it reacts with the oxygen in the air. This changes the pyrite into a very strong chemical called sulfuric acid. It also makes a material called "yellow boy" when there is water.

Years ago, when coal was all mined out of an area, the mining company just left. Groundwater carried the sulfuric acid to the streams of our coal mining regions. This acid killed almost all the plants and animals in the nearby creeks. All that was left was the "yellow boy" on the bottom of the stream.

Today, acid mine drainage is the main pollution problem in more than half of the miles of polluted Pennsylvania streams. The good news is that this problem isn't getting any worse. Today, mining companies must "reclaim" their mines. That means they have to prevent acid mine drainage from happening by repairing the land where they mined.

But what about all the miles of dead streams still in Coal Country? Some things are being done to clean these acid waters. Crushed limestone is sometimes added to the streams. Lime reverses or "neutralizes" the acid in the streams. Settling ponds for the drainage waters from the mines help prevent the yellow boy and other harmful materials from getting into the streams. Some mining companies even build cattail marshes to help filter the acid out of their mine drainage waters! Now that's really putting wetlands to work!

Acid mine drainage is a very serious problem for all Pennsylvanians. When we lose streams anywhere in the state, we lose a very important part of nature. Hopefully, we will someday see fish, crayfish and insects in these streams. Let's keep this kind of pollution from happening again.

