

# **Differences in instream wood characteristics between channelized and unchannelized agricultural headwater streams in central Ohio**

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Instream wood is an important resource for stream biota because it provides cover for fishes, substrate for macroinvertebrates, and increases habitat diversity. However, current management of instream wood within channelized agricultural headwater streams (drainage ditches) involves removing instream wood and woody riparian vegetation to facilitate drainage of cropland. Removal of instream wood decreases physical habitat heterogeneity and negatively impacts stream communities. Currently, knowledge on the amount and type of instream wood within agricultural headwater streams is lacking. My research objective was to quantify if the amount and type of instream wood differs between channelized and unchannelized agricultural headwater streams within the Upper Big Walnut Creek watershed. I established one 200 m length site in six channelized and six unchannelized agricultural headwater streams within the Upper Big Walnut Creek watershed. In June and July 2011 I systematically searched each site for instream wood (minimum size - >40 cm length and >2 cm diameter) within the wetted width of the streams. All instream wood found was measured and assigned to one of 16 instream wood types. Channelized streams contained mostly small simple pieces, large overhanging woody vegetation, and small branching pieces. In contrast, unchannelized streams were dominated by small simple pieces, large rootwads, and large logjams. The number of instream wood types, diversity, and percent large logjams were significantly greater in unchannelized streams than channelized streams. My results suggest a need for management strategies capable of increasing the abundance and diversity of instream wood within channelized agricultural headwater streams without impacting the drainage capacity of these streams.