

**E-coli counts in Dry-land
Streams; before, during and
after arrival and departure of
range-cows.**

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**An ongoing study in which four representative streams
are sampled monthly or more and additional streams
are tested at irregular intervals.**

This stream monitoring program was initiated in Mar 2007 after we became concerned with water quality in another stream as it came off public- land (range-land). In early 2007 when we took our concerns (and water testing results going back 2 years) to Range Branch we were told that “the contamination, if it existed, was likely coming from wildlife or avian sources rather than cows”. **Range Branch does no water testing.**

After some additional testing which appeared to indicate that cows were responsible for most or all of the contamination, we took our concerns to FREP (Forest & Range Evaluation Program). We were advised by several sources in FREP that contamination was likely from sources other than cows. **FREP does no water testing.**

We sought information from the Forest Practices Board. Although the FPB has produced several reports that expressed concerns about water quality and range-use, **FPB do no water testing.**

CONCLUSIONS

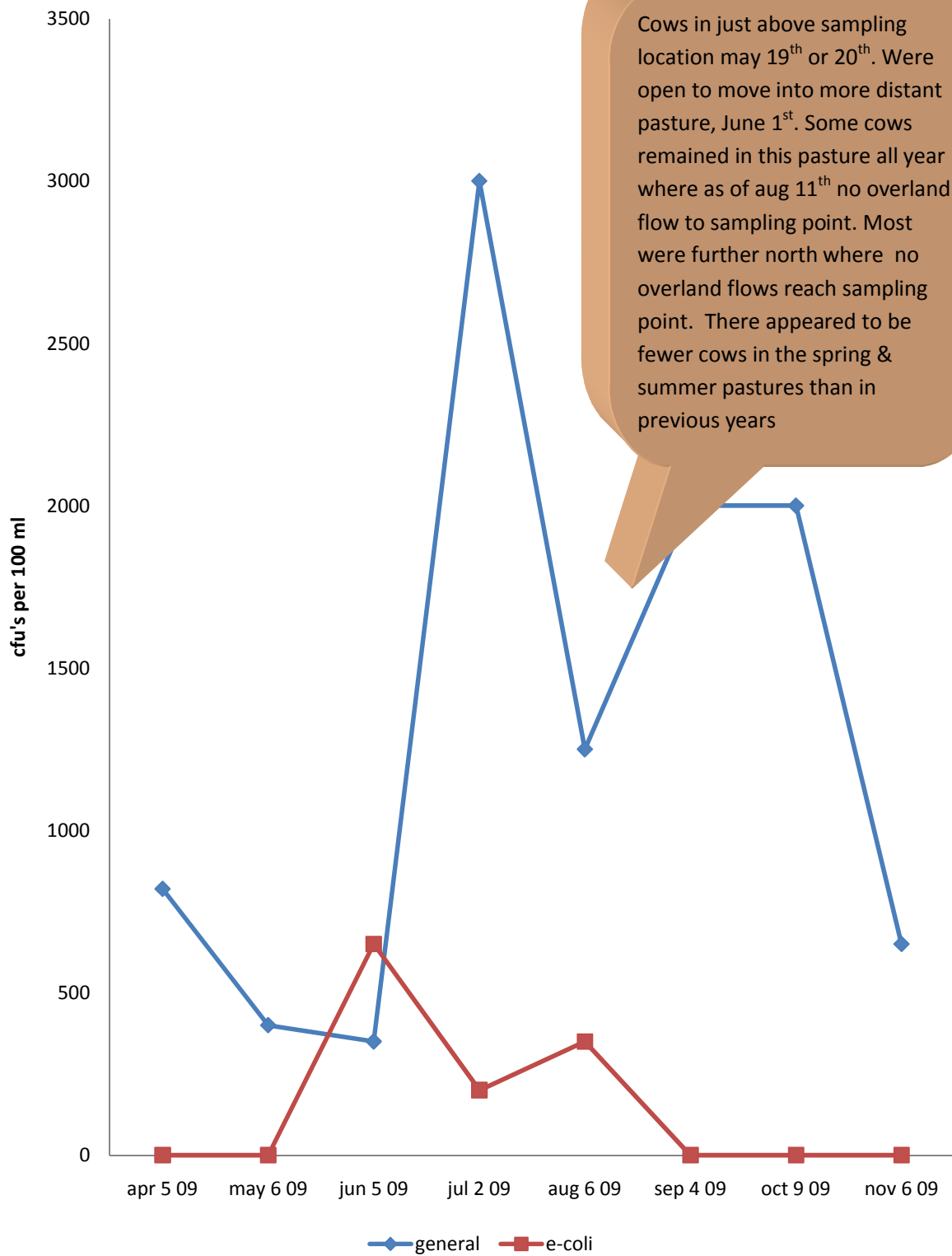
The attached graphs show e-coli and general coliform numbers and relates these numbers to the presence or absence of range-cows. From these results it can be seen that in the absence of range-cows, ecoli counts are low or mostly non-existent. On the arrival of range-cows e-coli counts jump.

We can reasonably conclude that “background” levels of e-coli from wildlife, canine, rodent, avian or other sources are not significant. We might also conclude that the “preferred belief” of Range Branch and FREP, that cattle are not primarily responsible for contamination, should be re-examined and re-evaluated for our local dry-land area.

These test results come as no great surprise to us as there is little or no effort in our area by the ranching community or Range Branch to protect water quality by developing or maintaining water sources designed to keep cattle out of streams. In recent years guidelines have been reduced making stream contamination more likely.

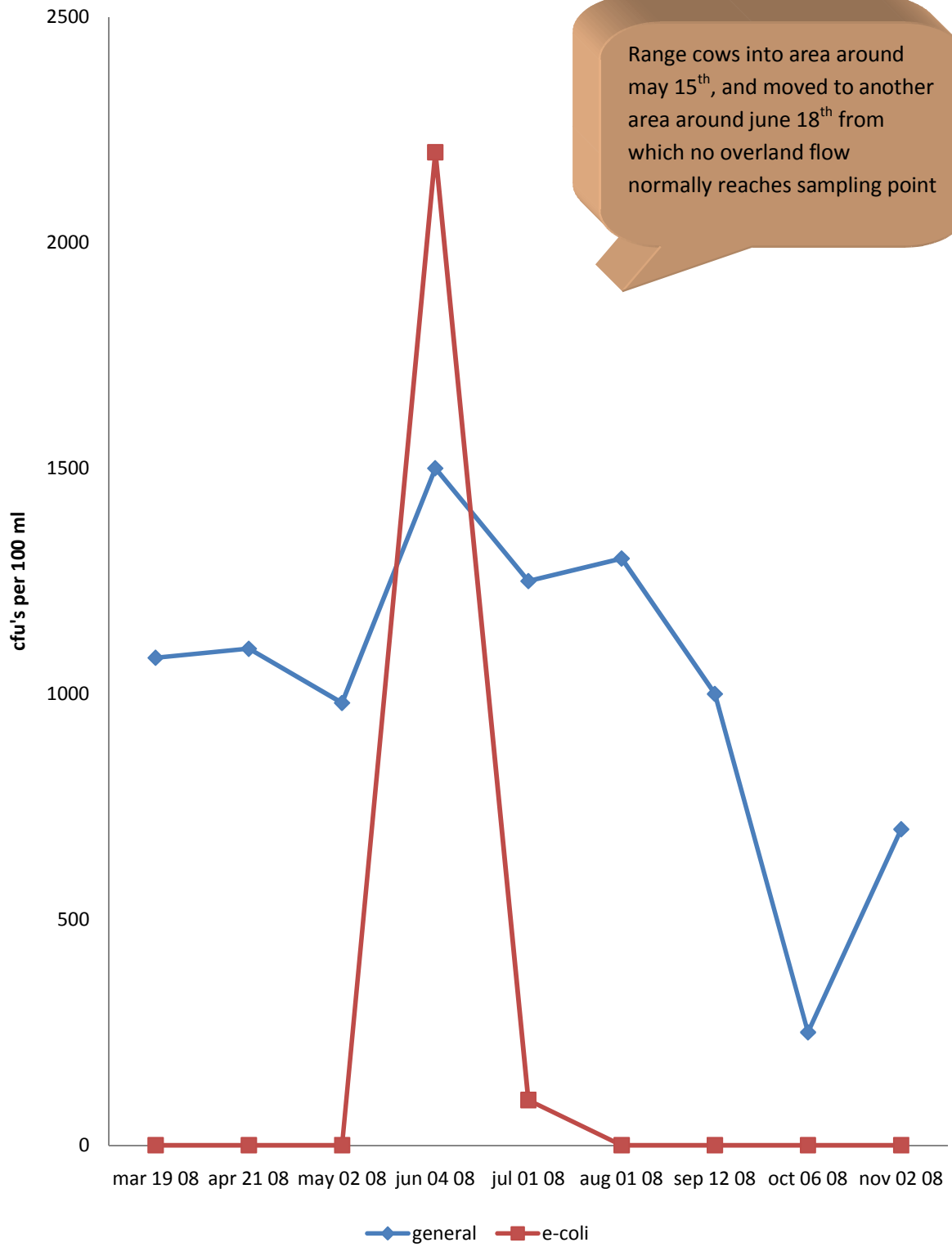
The companion document, *Pathogens and Protection*, discusses the factors that lead to stream contamination in our dryland area.

'D' creek 2009

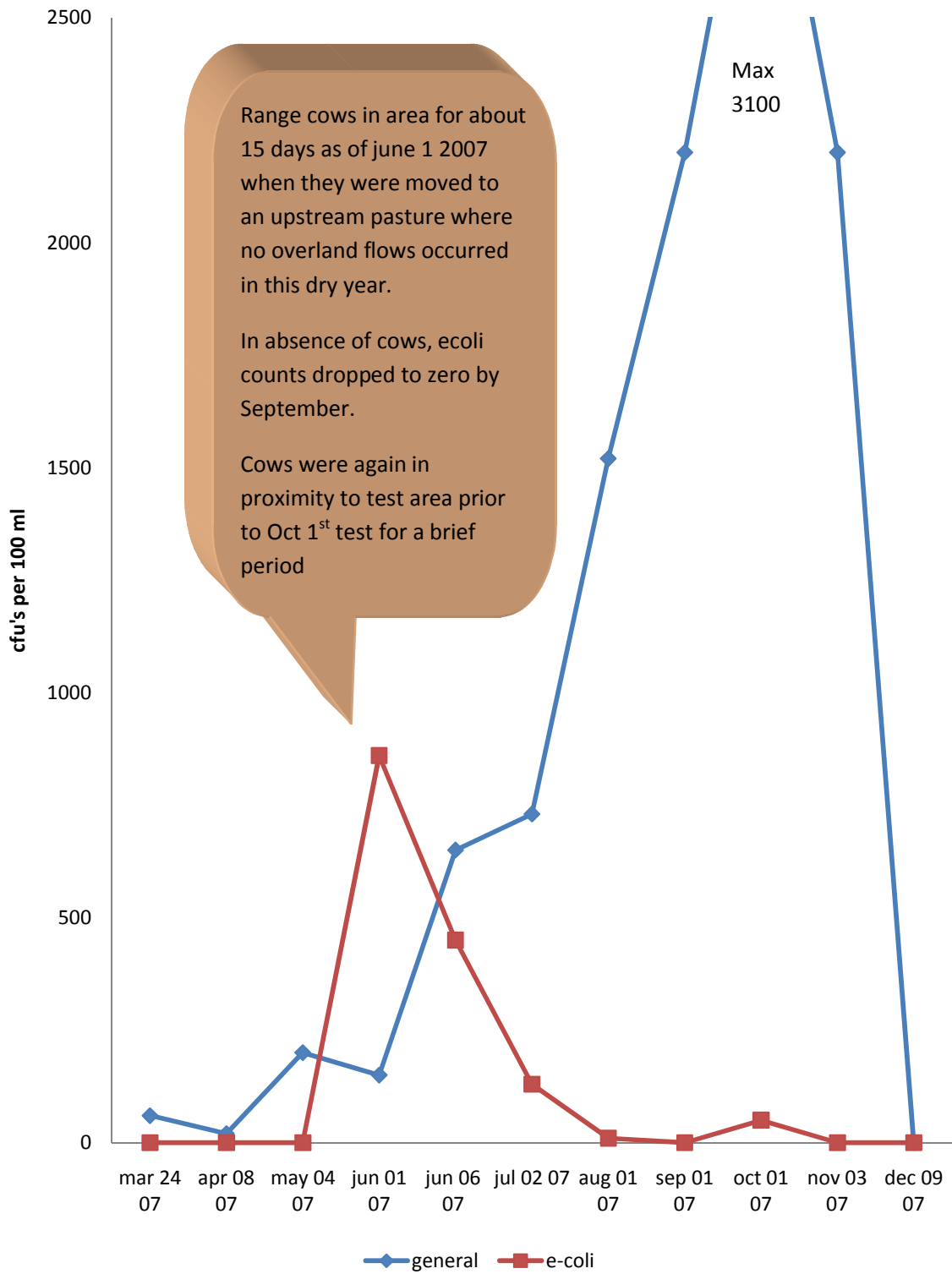


Cows in just above sampling location may 19th or 20th. Were open to move into more distant pasture, June 1st. Some cows remained in this pasture all year where as of aug 11th no overland flow to sampling point. Most were further north where no overland flows reach sampling point. There appeared to be fewer cows in the spring & summer pastures than in previous years

'D' creek 2008



'D' creek 2007



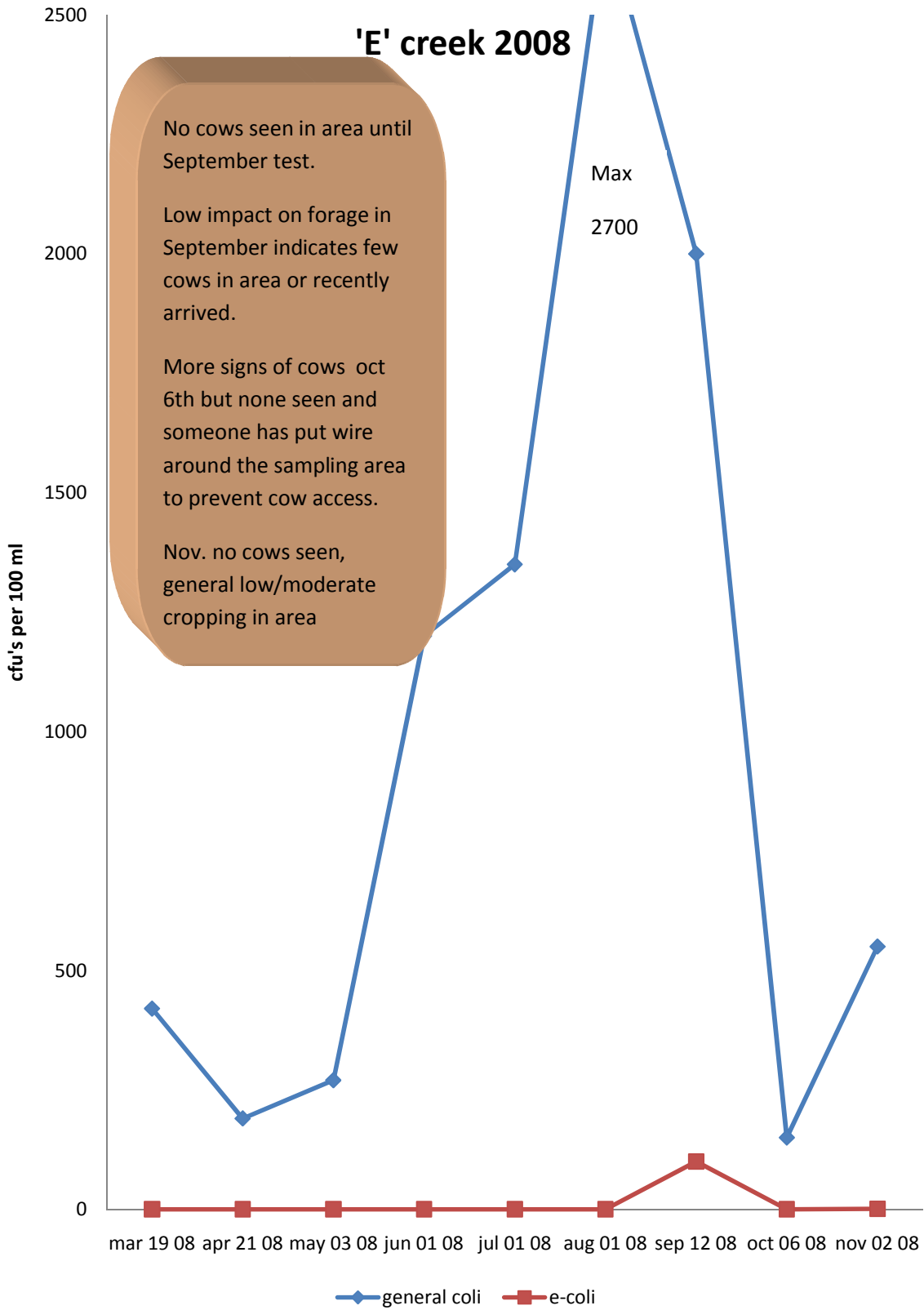
'E' creek 2008

No cows seen in area until September test.

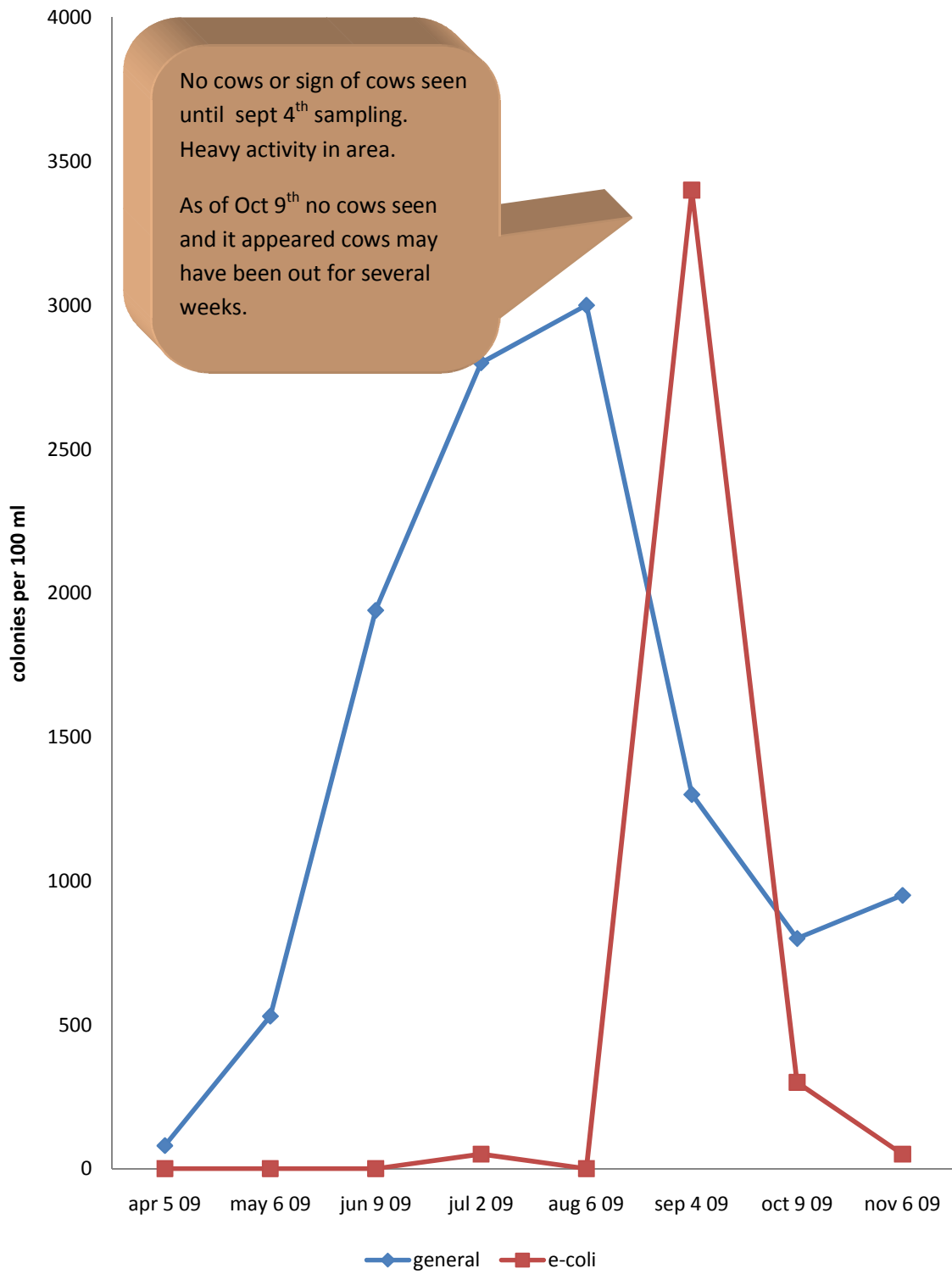
Low impact on forage in September indicates few cows in area or recently arrived.

More signs of cows oct 6th but none seen and someone has put wire around the sampling area to prevent cow access.

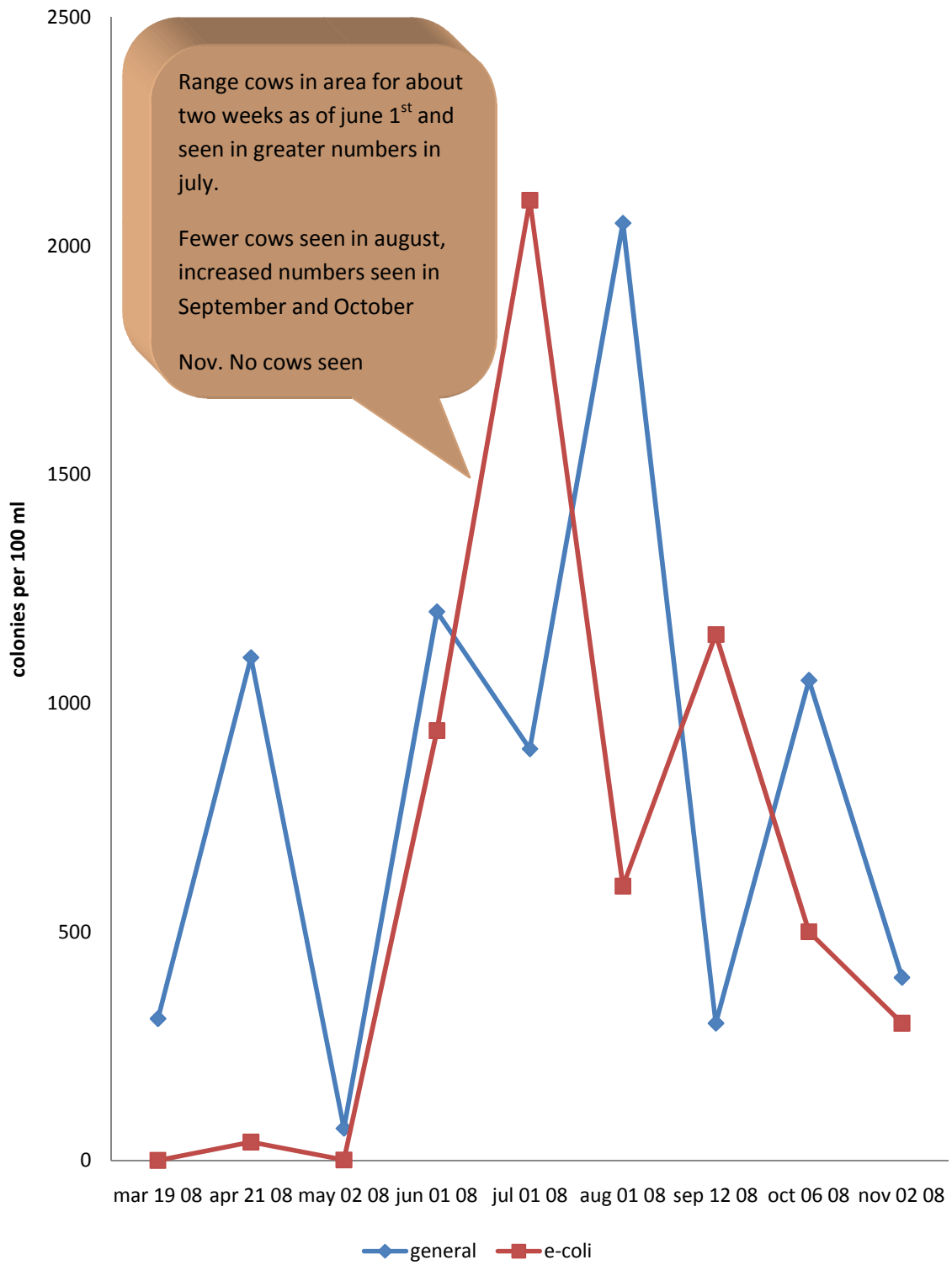
Nov. no cows seen, general low/moderate cropping in area

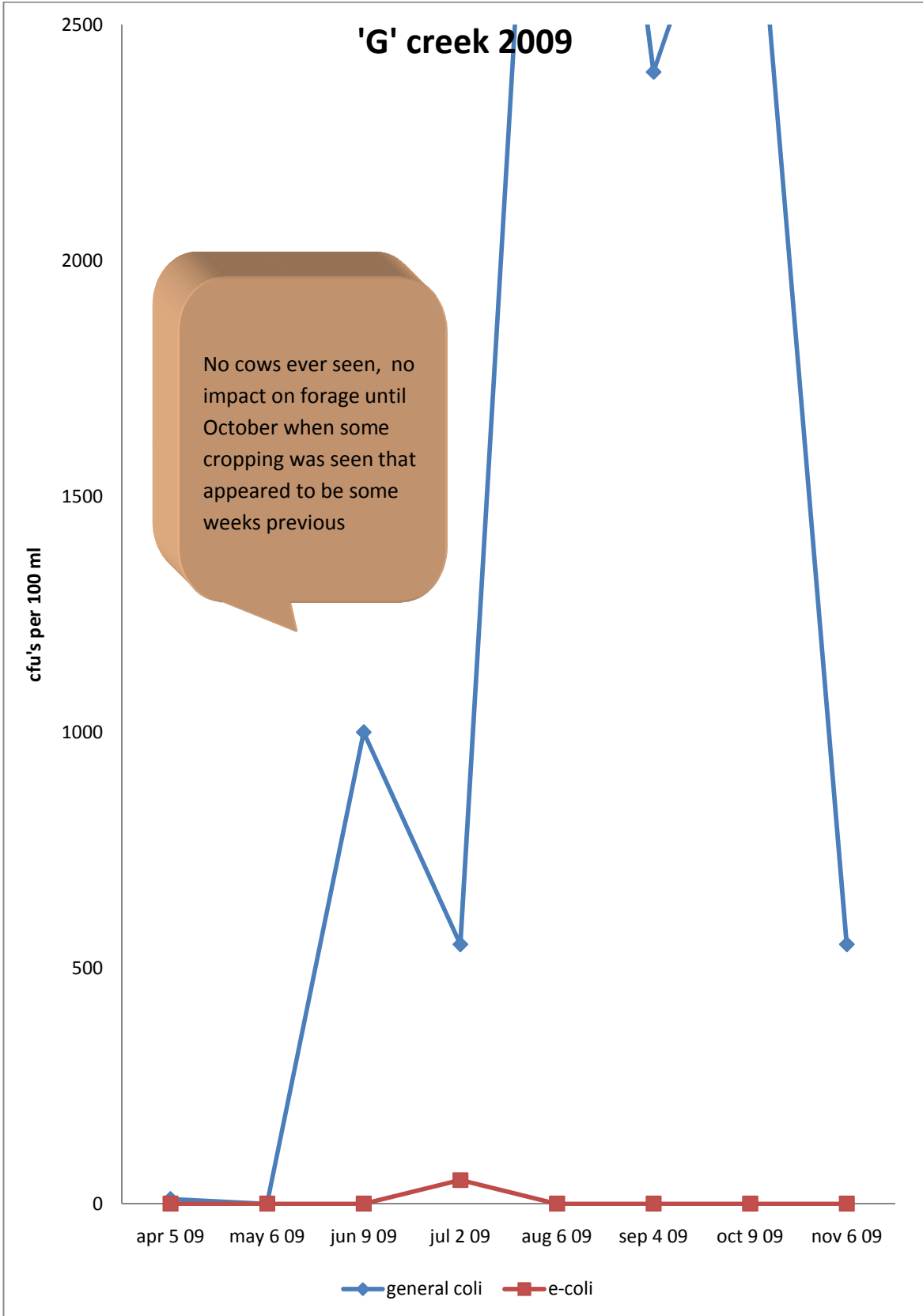


'F' creek 2009



'F' creek 2008





'G' creek 2008

