

Soil in comics

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Abstract

Comic strips and cartoons progressively became a respected art form, providing powerful imagery, expression of universal themes, and timely commentary on society. Thus, it is quite natural that the soil appears in comic strips and cartoons. In this paper, we review the various representations of the soil in comic strips and cartoons, structured around the soil functions scheme.

Key Words

Soil, comics, cartoons.

Introduction

From an anthropocentric viewpoint, soil functions can be defined as "the capacity of soil processes and components to provide goods and services that satisfy human needs, directly or indirectly" (after De Groot *et al.* 2002). Despite the use different terminologies, and to a lesser extent, different emphases and subdivisions, soil scientists generally agree on the main, or primary, soil functions. In this paper we investigate how the individual soil functions are portrayed in comic strips and cartoons, before discussing general themes and relative importance.

Soil habitat function

That soil is a habitat is often recognised in comic strips; however, only a small part of this remarkable soil biodiversity appears in comic strips. Most of the characters are macrofauna (mainly earthworms), but other animals, partly dependent on soil for their habitat, also appear (*e.g.*, rabbit, mole, badger, ant, platypus). In addition, numerous imaginary creatures populate the soils in comic strips. Soil, as all natural media, provided a source of inspiration for imaginary creatures and worlds. The fact that the soil is still largely unknown by almost everybody certainly enhances its fantasy potential.

Information function

Most material that primarily concerns the information function of soil can be subdivided into i) archaeology-related stories, *e.g.*, treasure hunting, and ii) comic strips that teach about soil processes or properties. A vast volume of educational comic strips in soil have been produced. Comic strips that primarily aim to entertain (*i.e.*, mainstream comic strips), rather than educate, reach a large proportion of the public. When soil is the topic of a mainstream comic strip, as for example in some Donald Duck stories, awareness of soil is raised with a large part of an age group outside of a school setting. Although more limited in its depth of soil information, this kind of soil information is a valuable aid in raising the profile of soil.

Production function

That the food we eat was grown in soil is something that all of us should be aware of. However, in most cases, cartoons and comic strips that feature the growing of arable crops do not link this to the soil. Tools for soil tillage are sometimes present, the most common of which is the spade. In the few cases where the link between food and soil was made, the soil was treated as a 'black box', *i.e.*, crops grow better in one soil than the other, but the reasons for this remain unclear, sometimes with an almost mystical element to it. Gardening was, by far, the most frequently encountered topic in soil-related comic strips. This is probably explained by the fact that more of us do small-scale gardening than large-scale farming. Of course, all of us eat food produced by, in, or on soil; but being one step removed from the process appears to have resulted in a limited personal association with soil, and, therefore limited coverage in comic strips.

Engineering function

Situations where soil properties and processes are not considered carefully enough, and lead to disaster, are

common topics in satirical cartoons. It is simply assumed that the soil will provide a good quality, stable platform for us and our structures. However, when the performance of the soil is not in check with the structures we have placed upon it, the soil is easily blamed, although in nearly all circumstances, faulty human planning was to blame.

Regulation function

The regulation function was the least encountered soil function in the investigated comic strips. From an environmental point of view, as well as from a scientific position, the interaction of soil with other ecosystem components is arguably the most important soil function of all. However, examples of the regulation function of soil featuring in comic strips proved to be few and far between.

Conflicts between soil functions

In comic strips, such as in other arts, conflicts between soil functions are mainly reflected in land use clashes of interest. Classical examples come from the history of the American West (*e.g.*, extension of the railway, cattle ranchers vs. "sodbusters"). Other numerous examples of conflicts of interest relate to gardening vs. animal habitat (*e.g.*, hunting the moles), or gardening vs. animal activity.

Soil inventory and monitoring

As conflicts between soil functions must be solved, and as soil is a natural resource of common interest that is under increasing environmental pressure (CEC 2006), it is essential that soil inventory and monitoring are undertaken, in order to manage this resource properly. Soil inventory and monitoring are quite esoteric subjects, and as such, are almost never encountered in comic strips. However, from the soil scientist community (newsletters, websites, educational books), comics strips illustrating soil surveyors doing fieldwork are far more numerous. Digging the soil is a very frequent activity in such comic strips and cartoons.

Conclusions

With the rise of the Internet, the use of comics seems to be a growing area, with several initiatives by government agencies and research institutes as part of their public education outreach to help raise awareness of soil as an ecosystem component and a fragile resource. In the more mainstream comic strips, aspects of the production, habitat and engineering functions of soil appear to receive most attention, whereas the regulation function seems to be underrepresented. Compared to the other two main natural media on the planet (*i.e.*, water and air) soil appears to receive relatively little attention in comic strips. For educational comic strips, however, the regulation function, with all its complex interwoven soil biological, chemical and physical processes, may be a fertile source of inspiration.

References

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