

# The comic strip: a good means of communication on soil!

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## Abstract

Comic strips are a means of communication not much exploited in science of the soil to sensitize the general public. 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 (Richer de Forges *et al.* 2010). In this paper, we present an example of a comic strip focusing on characters belonging to macrofauna (the hero is an earthworm), but other animals, partly dependent on soil for their habitat, also appear (*e.g.*, mole, field mouse, ant).

## Key Words

Soil, comic strips, communication, earthworm, macrofauna.

## Introduction

Comic strips and cartoons progressively became a respected art form, providing powerful imagery, expression of universal themes, and timely commentary on society. According to a study by the French National Institute for Statistics and Economic Studies (INSEE), more than a quarter of the adult French population read comic strips. The young persons read more comic strips than the others (47 % of the 15-19 years old, 16 % of the 55 to 64 years old, and only 4 % of the 65 and more years old). The men read them more than the women (31% of men, 21% of women) and qualified persons more than those unqualified (52 % of those having the upper level of education and 8 % of those who have no certificate at all). This means of communication can be used to develop soil awareness. In this paper, we present an example of a comic strip focusing on characters belonging to macrofauna (the hero is an earthworm), but other animals, partly dependent on soil for their habitat, also appear (*e.g.*, mole, field mouse, ant).

## Soil in comic strip

According to Richer de Forges *et al.* (2010), the soil appears to receive relatively little attention in comic strips. However, soil, as all natural media, may provide a source of inspiration for real or imaginary creatures and worlds. The fact that the soil is still largely unknown by almost everybody certainly enhances its fantasy potential. The soil inhabitants may be a fertile source of inspiration, spokesmen for soil protection, and a means to attract young people toward a soils career.

## A new comic strip: the adventures of “Childéric le lombric”

We realised a comic strip based on soil macrofauna adventures. The main message that we want to deliver is that soil is a living, amazing, exciting, entertaining, coloured... world. Nearly all the "real world" soil animal characters that feature in comic strips are earthworms. Other animals, living in burrows, often appear in comic strips. The most frequent one is the mole. Another frequently character is the badger. Most often, soil animals also appear, not as specifically personified characters, but as part of the story. We chose an earthworm as our main hero because it is the most famous animal living in soil. Other characters are soil animals unknown by the general public (*Oribatida* [beetle mites], *Symphyleona* [springtails]...). For practical reasons, we chose deliberately not to take into account real sizes of these organisms.

## A Darwin's scenario

In 1838 Darwin published his first paper on earthworms, showing their importance for bioturbation and the burial of surface-lying objects, and placing him as a pioneer of soil science (Brown *et al.* 2003; Feller *et al.* 2003). In October 1881, nearly 44 years after writing his first paper, and about 6 months before his death, Darwin published his last book, “The Formation of Vegetable Mould through the Action of Worms with Observations on their Habits”. In this book, Darwin relates his different experiments on earthworms in order to know if they have senses (hearing, smell, view, etc). In our comic strip, these experiments are lived by our heroes who feel like "the prisoners of Darwin". Earthworms also draw conclusions from Darwin's experiments. Their conclusions can therefore differ from Darwin's ones. In this comic strip, we also introduce soil animals that are unknown by the general public.

## Conclusion

The power of comic strips to aid in the education seems substantial. Contrary to air and water (and above-ground biology), soil is a visually poor medium, certainly for above-ground dwellers like humans. Comic strips provide a means of visualising the opaque world of soil. Moreover, comic strips are not hindered by issues of scale, i.e. from macro soil fauna to microbial organisms or molecular scale processes. At the same time, the ability to visualise across spatial scales concomitantly implies a responsibility or challenge to take scale into consideration in the education process.

## References

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