

Interstitial habitats and the urban-rural relationship in eastern Denmark

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Statement of the problem

In Denmark the urban areas take up an increasing part of the total land area - today about 10%. At the same time the total rural area - about 70% - is decreasing, and this causes a number of rural-urban-conflicts. The effects of these conflicts on the interstitial habitats situated in and between the fields on the urban fringe are discussed in this paper. Furthermore it will be shown how urban development results in establishment of new types of small, more-or-less uncultivated areas.

Survey of previous work

The rural-urban conflicts and their effect on production and farm-structure has been studied in Denmark (Jensen 1976, Jørgensen 1978). The fate of the interstitial habitats in the rural environment has been studied by the authors of this paper (Agger et al, 1981). The urbanization process, as a landscape-forming factor with special reference to interstitial habitats, has not yet been thoroughly studied in Denmark.

The present work

The interstitial habitats (drainage ditches, hedges, pits and ponds, etc.) make up an important fraction of "Nature" in Denmark. This fact and their potential use as areas for outdoor recreation close to the city, are the main reasons for this study.

The study of the changes in area, number and character and the identification of the urbanization process in this context, constitute a part of the ongoing work and is funded by the university and the Danish Agricultural and Veterinary Research Council.

In 13, 1 km² areas - located in the immediate vicinity of the city of Odense on Fyn - the interstitial habitats are being mapped. Type, content and status of each individual habitat are briefly described in field studies. We are using aerial photographs to map the changes in the amount and character of habitats together with the urbanization of their environment. Interviews with the owners or tenants give information on the present and previous production, farmstructure and on the recreational use of the habitats. The city authorities dealing with planning and conservation are also being consulted. Odense (about 140.000 inhabitants), has been chosen because the city authorities here perform advanced landscape-planning for recreational purposes, and this must be expected to become more common in the future around other Danish cities.

The consequences of urbanization

It is possible to point out a number of tendencies that influence farm-structure and production which must be expected to cause a change in the pattern of habitats. The most important are mentioned below:

- Increasing land values and ground-rents (due to planned or expected urban development)
- Increasing proportion of tenancy (often short-termed)
- A growing number of elderly farmers
- Decreasing animal husbandry
- Fewer and smaller investments in production.

Normally the high taxes force the farmers to utilize their land to the greatest extent. This can lead to the removal of interstitial habitats, which otherwise would have remained, e.g. for hunting purposes. The coming urban development and the short-termed tenancies may result in less maintenance of hedges. Fewer livestock causes many pits and ponds to lose their function as watering-places which again can lead to their filling. Likewise, the fall in livestock production results in a smaller number of crops, which tends to reduce the number of necessary field divides, such as hedges and dikes.

On the other hand the normally smaller investments of elderly farmers is a factor which may result in a prolonged existence of some habitats.

The new types of habitats which emerge as a result of urban development, consist mainly of recreational areas and footpaths. Around Odense many plantations of different sizes, consisting mainly of deciduous trees, are being established. Besides these, the following habitats can be found in a higher proportion nearest to the city: Ponds for drainage overflow, ruderal areas (i.e. areas which are left un-utilized due to forthcoming urban development), shelter plantings around industrial and residential areas, plus small farms (owned by nonfarmers) which are wholly or partly planted with trees. Many of the tendencies mentioned above can work both ways, but it is our hope that we, at the symposium, can throw more light on the primary trends in the habitat pattern on the urban fringe.

References

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