УДК / UDC 630 УДК / UDC 635.9 УДК / UDC 674

Online ISSN 1857-9507 www.sf.ukim.edu.mk/sumarski_pregled.htm

ШУМАРСКИ ПРЕГЛЕД FOREST REVIEW

МЕЃУНАРОДНО НАУЧНО СПИСАНИЕ INTERNATIONAL SCIENTIFIC JOURNAL



115 FOR THE OF HANS EM'S BIRTH



60 ГОДИНИ ШУМАРСКИ ПРЕГЛЕД YEARS FOREST REVIEW

Шум. преглед (Šum. pregled) For. review Год. 44 Vol. 44 Стр. 1-39 Рад. 1-39 Скопје, 2013 Skopje, 2013



УНИВЕРЗИТЕТ "Св. КИРИЛ И МЕТОДИЈ" ВО СКОПЈЕ Ss. CYRIL AND METHODIUS UNIVERSITY IN SKOPJE ШУМАРСКИ ФАКУЛТЕТ ВО СКОПЈЕ FACULTY OF FORESTRY IN SKOPJE



Online ISSN 1857-9507 www.sf.ukim.edu.mk/sumarski_pregled.htm

УДК / UDC 630 УДК / UDC 635.9 УДК / UDC 674

ШУМАРСКИ ПРЕГЛЕД FOREST REVIEW

МЕЃУНАРОДНО НАУЧНО СПИСАНИЕ INTERNATIONAL SCIENTIFIC JOURNAL

Шум. преглед (Šum. pregled) For. review Год. 44 Стр. 1-39 Vol. 44 Рад. 1-39 Скопје, 2013 Skopje, 2013

ШУМАРСКИ ПРЕГЛЕД

Меѓународно научно списание Год. 44 / Стр. 1-39 Скопје, 2013

FOREST REVIEW

International Scientific Journal Vol. 44 / Pag. 1-39 Skopje, 2013

Online ISSN 1857-9507 УДК 630 УДК 635.9 УДК 674 Online ISSN 1857-9507 UDC 630 UDC 635.9 UDC 674

Издавач Publisher

Dean

Универзитет "Св. Кирил и Матодиј" во Скопје Шумарски факултет во Скопје Декан Д-р Јане Ацевски

> **Главен и одговорен уредник** Д-р Ирена Папазова-Анакиева

Editor-in-chief Irena Papazova-Anakieva PhD

Jane Acevski PhD

Faculty of Forestry in Skopje

Ss. Cyril and Methodius University in Skopje

Ljupčo Nestorovski PhD (Skopje, Macedonia)

Milosav Anđelić PhD (Podgorica, Montenegro)

Marilena Idžojtić PhD (Zagreb, Croatia)

Milorad Danilović PhD (Belgrade, Serbia)

Margarita Georgieva PhD (Sofia, Bulgaria)

Bojan Simovski MSc (Skopje, Macedonia)

Robert Brus PhD (Ljubljana, Slovenia) Ciprian Palaghianu PhD (Suceava, Romania)

Уредувачки одбор Editorial board

Д-р Љупчо Несторовски (Скопје, Македонија)
Д-р Марилена Иџојтиќ (Загреб, Хрватска)
Д-р Милосав Анѓелиќ (Подгорица, Црна Гора)
Д-р Милорад Даниловиќ (Белград, Србија)
Д-р Роберт Брус (Љубљана, Словенија)
Д-р Чиприан Палагиану (Сучава, Романија)
Д-р Маргарита Георгиева (Софија, Бугарија)
М-р Бојан Симовски (Скопје, Македонија)

Технички уредник М-р Бојан Симовски

Корица и насловна фотографија М-р Бојан Симовски, *Arbutus andrachne*

Излегува еднаш годишно

Интернет-страница

www.sf.ukim.edu.mk/sumarski_pregled.htm

Адреса на издавачот

УКИМ-Шумарски факултет во Скопје Редакција на Шумарски преглед Ул. "16 Македонска бригада" бр.1 (П. фах 235) 1000 Скопје Република Македонија Е-пошта: sumpregled@sf.ukim.edu.mk www.sf.ukim.edu.mk

Technical editor

Bojan Simovski MSc

Cover page and photography

Bojan Simovski MSc, Arbutus andrachne

Published once a year

Web page (on-line)

www.sf.ukim.edu.mk/sumarski_pregled.htm

Publisher's address

UKiM Faculty of Forestry in Skopje Editorial Board of the Forest Review Ul. 16 Makedonska brigada br.1 (P.O. box 235) MK-1000 Skopje Republic of Macedonia E-mail: sumpregled@sf.ukim.edu.mk www.sf.ukim.edu.mk

Шум. преглед (Šum. pregled) For. review Год. 44 Vol. 44 Стр. 1-39 Рад. 1-39 Скопје, 2013 Skopje, 2013

ШУМАРСКИ ПРЕГЛЕД

Меѓународно научно списание Год. 44 / Стр. 1-39 Скопје, 2013

FOREST REVIEW

International Scientific Journal Vol. 44 / Pag. 1-39 Skopje, 2013

Online ISSN 1857-9507 УДК 630 УДК 635.9 УДК 674 Online ISSN 1857-9507 UDC 630 UDC 635.9 UDC 674

Научен и рецензентски одбор

Д-р Борут Вршчај (Љубљана, Словенија) Д-р Васка Сандева (Штип, Македонија) Д-р Јане Ацевски (Скопје, Македонија) Д-р Јасминка Р. Атанасовска (Скопје, Македонија) Д-р Кирил Крстевски (Скопје, Македонија) Д-р Љиљана Дошеновиќ (Бања Лука, БИХ) Д-р Марко Зебец (Загреб, Хрватска) Д-р Матиас Дис (Фрајбург, Германија) Д-р Петра Хлавачкова (Брно, Чешка Република) Д-р Стефанка Хаџи Пецова (Скопје, Македонија) М-р Иван Минчев (Скопје, Македонија)

Scientific and reviewers board

Borut Vrščaj PhD (Ljubljana, Slovenia) Vaska Sandeva PhD (Štip, Macedonia) Jane Acevski PhD (Skopje, Macedonia) Jasminka R. Atanasovska PhD (Skopje, Macedonia) Kiril Krstevski PhD (Skopje, Macedonia) Ljiljana Došenović PhD (Banja Luka, Bosnia and Herzegovina) Marko Zebec PhD (Zagreb, Croatia) Matthias Dees PhD (Freiburg, Germany) Petra Hlaváčková PhD (Brno, Czech Republic) Stefanka Hadji Pecova PhD (Skopje, Macedonia) Ivan Minčev MSc (Skopje, Macedonia)

Интернет-адреса

www.sf.ukim.edu.mk/sumarski_pregled.htm

eca Web page (on-line)

www.sf.ukim.edu.mk/sumarski_pregled.htm

Адреса на издавачот

УКИМ-Шумарски факултет во Скопје Редакција на Шумарски преглед Ул. "16 Македонска бригада" бр.1 (П. фах 235) 1000 Скопје Република Македонија Е-пошта: sumpregled@sf.ukim.edu.mk www.sf.ukim.edu.mk

Publisher's address

UKiM Faculty of Forestry in Skopje Editorial Board of the Forest Review Ul. 16 Makedonska brigada br.1 (P.O. box 235) MK-1000 Skopje Republic of Macedonia E-mail: sumpregled@sf.ukim.edu.mk www.sf.ukim.edu.mk

CONTENTS

Preface	
Bibliography (monograph articles):	
Papazova-Anakieva I., Nacheski S., Koljozov V., Simovski B. BIBLIOGRAPHY OF Acad. HANS EM	1
Original Scientific Articles:	
Danilović M., Stojnić D., Novković N., Gačić D. THE STATE OF FOREST ROADS AND DETERMINING AN OPTIMUM DENSITY OF A FOREST ROAD NETWORK USING GIS	6
Gačić D. P., Danilović M., Đorđev Lj. LINED IRRIGATION CANALS IN FIELD HUNTING GROUNDS OF VOJVODINA AND THEIR INFLUENCE ON WILDLIFE	11
Toromani E., Thaci B., Seci A. TECHNOLOGICAL ADVANCEMENT IN THE EFFICIENT USE OF WOOD AS ENERGY SOURCE	16
Trajanov Z., Nestorovski Lj., Trajkov P. TRANSPORTATION COSTS AS AN INDICATOR FOR DETERMINATION OF THE OPTIMAL ROAD DENSITY	20
Preliminary Publications:	
Baştemur T. C., Güneş G. RURAL TOURISM IN PROTECTED AREAS: A CASE STUDY FROM KURE MOUNTAINS NATIONAL PARK - TURKEY	23
Professional Articles:	
Despot K., Sandeva V., Simovski B., Acevski J. PLANNING OF URBAN GREEN AREAS OF ŠTIP	31
Sandeva V., Despot K., Simovski B., Nikolov B., Gjenchevski D. THE MAIN FUNCTION OF PLANT DESIGN OF PARKS AND GARDENS	34
Instructions to Authors	

PREFACE

Dear Colleagues and Readers,

We are happy to announce the online publication of the 44th volume of Forest Review! Furthermore, this is a special year because we celebrate two great jubilees- 60 years since the first volume was published and 115 years of Acad. Hans Em's birth.

During our past 43 volumes, we had an excellent cooperation, especially with the faculties of forestry from the Balkan and South-eastern European countries. We hope this volume will be interesting in particular, due to the last year efforts of the Editorial Board, making the Forest Review an International Scientific Journal, and this year result to become a member of ISSN network online, beside the international print standard.

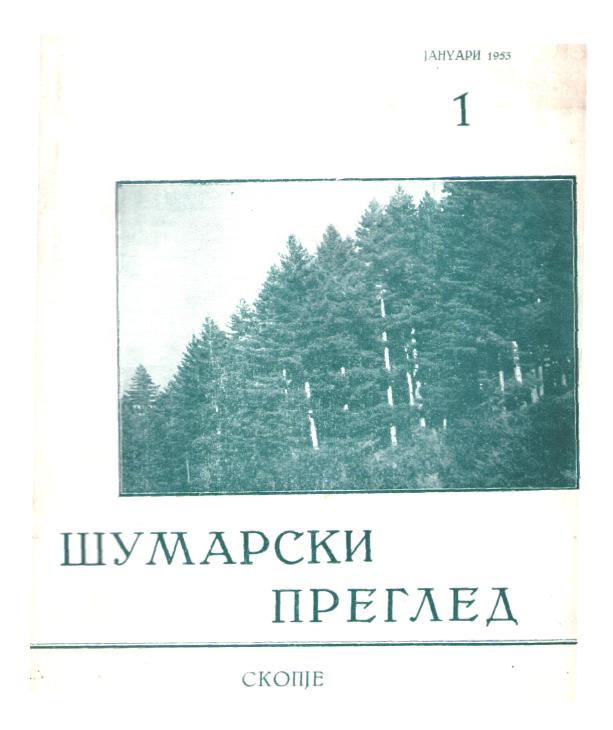
This year we have published articles from various countries, and we hope that the next edition will be even more interesting. Articles treat different forest-based issues, and are peerreviewed by significant forestry authorities from different countries.

Many thanks to all authors and members of the Forest Review, as well as to all peer – reviewers for the participation.

On behalf of the Editorial Board,

Prof. Irena Papazova-Anakieva PhD, Editor-in-Chief

Sixty years of scientific publishing...



... Front cover of the 1st volume of Forest Review published in January 1953

PLANNING OF URBAN GREEN AREAS OF ŠTIP

¹DESPOT K., ¹SANDEVA V., ²SIMOVSKI B., ²ACEVSKI J.

¹Goce Delčev University - Štip, Štip, Macedonia

²Ss. Cyril and Methodius University in Skopje, Faculty of Forestry in Skopje, Skopje, Macedonia Corresponding author e-mail address: katerina.despot@ugd.edu.mk

ABSTRACT: The setup structure of functions for holiday and recreation in spare time of the citizens is a great worth. The needs of the urban population for rest and recreation are becoming larger, thus increasing the need for design and planning of green spaces (parks, gardens, etc.) not only in cities but also in their immediate environment. In many cities around the world for centuries been paid great attention to this area.

In this paper we try to present the main processes in the planning of urban recreational areas of emphasis of the Municipality of Štip.

Keywords: city, recreation, park, garden, planning, Štip.

1 INTRODUCTION

The art of the past greenness planning we talk superficially like because of insufficient evidence of gardens and parks in the past and because of the change of plant life over the centuries. For this art conclusions can be made only on the basis of written documents. The actual study of parks and greenness planning starts even with the emergence of Baroque renaissance and when exercised great artwork and greenness spatial and park art.

Park art is one of the oldest arts which dealt with the arrangement and shape of the compartment. It explores the relationship of man to nature, developed under the influence of society and the beginning tended to subdue nature to its influence, but later changed as the level of development of culture also changed the relationship to nature that now tend to be regulated and more to retain that natural. The landscape art in the past had huge approach of development, elaborating and creating areas around temples and mansions and establishing newborn park surfaces.

The establishment of green areas of a city is continuous process. It includes everything that is observed in the past and proposing future.

Planning green spaces in residential areas begins with the formation of larger cities and today it represents a very important element in modern planning and execution of new and reconstruction of old urban neighborhoods. Making green the living area is as old as mankind. Co over the centuries as developed cultures that evolved way of thinking and planning environment.

Application of making green in the space of residential blocks is very important and is based on knowledge of hygienic and health influence on making green on quality of life, and cosmetic application in decorating the space.

Green spaces in cities are one of the basic elements of hygiene in the city. They have the function of purifying air, recreation and aesthetic function. In complex urban green spaces refreshing act of respiratory organs and the nervous system of the people.

The green areas are significant regulating factor of the climate in the living estates. The temperature differences of minimum and maximum value are remarkably less in forest complexes than unsheltered open spaces. With creating green areas, the air humidity is regulated, so during the day it is increased and night time the air humidity is decreased. In the forests, the air humidity is higher up to 20 % than in city solitaries and the air temperature is 3° to 5 °C lower than the city.

From temperature differences in green areas and residential blocks resulting in permanent towns currents to equalize the temperature, especially if boxwood complex located above the settlement of mild slope. This summer airflow reduces the temperature in the neighborhood and in winter the process is reversed.

Hygiene biological effects of making green be accomplished with planning of green areas, the choice of plant life and their proper arrangement in space. Making green presents a series of phenomena that affect the improvement of life in the neighborhoods. Greenness planning in space can act as a free-standing individual, as a group or as a defense greening, in color during the flowering, height etc.

Green space laced in the form of ribbons around town and around the residential blocks and streets affects the reduction of urban noise, dust and smoke. CO green organic surfaces associated vacant urban land and a city block with them also decorate and suburban areas of terrain.

As from the rising cities and industry found need to pay more attention to what green spaces in urban areas function because there is a considerable number of bacteria in the air, than in forested areas and making green significantly affect the health of residents, from that point of view like many other previously mentioned should seek greenery to engage in all parts of the cities and towns; And also strives to be evenly and properly distributed. Improper and uneven distribution of green leads to some parts that are more hygienic in the green area, and others who are less hygienic.

2 PLANNING GREEN SPACES IN THE MUNICIPALITY OF ŠTIP

2.1 New fountain and Park of Generations in high school Vančo Prke

Unarranged space behind the high school Vančo Prke, which was set up makeshift shed and trade, now slowly getting deserved attention and looks. Municipality of Štip in collaboration with the high school and PE Isar recently began editing activity in this place which is located next to the garden and park at the Vančo Prke.

With intake, not arranged space is turned into a green area with new plantings of evergreen trees and the whole park is raised to a higher level with the construction of rustically stone wall (Fig. 1). On the place of a removed cabin, a beautiful fountain is constructed, which will transform this central position in an aesthetic, modern, urban space.

The unpleasant view in the core of the city is removed.

What was neglected location today is a wonderful place, ennobled by green space, a park, a new fountain and benches for rest and relaxation, which means the place as it befits a city.



Figure 1: Construction of a new fountain and the Park of Generations in high school Vančo Prke in Štip (before, during and after the greening)

2.2 Edit parks surfaces in municipality Babi

Municipality of Štip began editing two neglected areas in parks municipality Babi. It is about two sites located in the center of the district, where the location of the market is found. Parks areas are two collective residential buildings.

Editing began construction tracking walls, which projected park area would be prevented from entering the grass surface, forming a paving paths, planting new trees and horticultural landscaping. There will be placed unifying booths on the part projected for mini market place, and the whole area will be arranged.

2.3 Park of Pharmacy

Macedonia got the first pharmacy park located in the Municipality of Štip (Fig. 2). The park is located in Štip, Duzlak settlement. This surface of one hectare will be botanical garden same like the gardens in Bon, Vienna, Bern. It will be arranged in conjunction with University of Goce Delčev experts.



Figure 2: Park of Pharmacy - botanical garden in Štip, Duzlak settlement

2.4 Editing of the river bed Bregalnica neighborhood 8 November

Municipality of Štip initiated activities editing part of the river in the neighborhood Bregalnica 8 November. This is the area which is located near Kucuk Emir Sultan Bridge also known as the stone bridge. Above it, along the course of Bregalnica extends greater park area which will be enriched with two mini - fountains and along the bed of Bregalnica will form walkways and paving the entire area will be refined with benches, lampposts and horticultural concept (Fig. 3).

2.5 Edit the river Otinja

The project is made by PE Štip Project, Stipion and the Department of Urbanism of the Municipality of Štip. This project involves the excavation right through the water and river sediment Otinja on the left, where flooding is taken for bed. Scattering through the excavation of the right will provide land and left. According to the project, which will be done in phases, the bed will have three layers: the bottom (base) of fence riverbed, middle layer, and the upper (the walls) on the seafront.

The basin will be 4 meters wide, 14 meters middle layer and final layer the walls with a width of 3 meters. The width of the bed is about 27 meters. Nearby riverbed Otinja planned is lawn enriched with flowers and trees that will further beautify this central city area.



Figure 3: Editing of the river bed Bregalnica neighborhood 8 November in Štip

2.6 Horticultural arrangement of the new roundabouts on the Vančo Prke street.

Teams of PE Isar work of Horticultural islands of new roundabouts on the street Vančo Prke. The islands, planted flowers, green grass and shrublands trees and decoration are complemented by large decorative white sand. The next activity will be a new procedure for the large fountain roundabouts.

2.7 Sports - recreation centre Suitlak

City stadium, sport hall and play grounds, hotel resort, working and commercial objects, City Park and public parking space will be the content subjects in sport and recreational center Suitlak in Shtip.

The total area of 22.5 hectares, it is planned to build the southeast end of the city park area of the present park K'rteke. In the first phase will begin construction of a new football stadium, and the realization of the entire project will be gradual.

The content of the elements in this global mosaic will contribute this location to be an interest of all citizens of Štip, "from 5 to 85 years". It involves people who want free walk, sports recreation, football pitch, global events, new stadium or enjoying the aroma of coffee in natural environment with restaurants or hotel facilities.

The site occupies part of the space of the existing park K'rteke (Fig. 4). Located at the end of the metropolitan area, the southeast end of town is another confirmation of its location in the urban plan of the city. The total area covered under the described limit is 22.5 hectares. The site offers opportunities for construction of facilities for sport and recreation, and small commercial buildings, offices and hotel complex, of course in proportion as it allows compatibility.

According to the plan and as designed, the sports recreation center will have a football field, a temporary playground, a sports field that will be substituted for the location Jackson because is scheduled to build a new residential complex, universal sports hall, two large parks, an amusement park and auxiliary fields.

One term will be an area of 22,532 m^2 or 10.2% of the total area. Since it will be 25,407 m^2 and 2,875 m^2 park protective foliage.



Figure 4: K'rteke park (present) and designed Sports - recreation centre Suitlak in Štip

2.8 New sports-recreation centre in the Duzlak neighborhood

Brand new sports park part Duzlak sprouted in the neighborhood where the former location is full of garbage, slowly gaining character of a sports complex that will include a footbal and basketball pitch while working on park system that will trim paths from block paving, benches, alleys, flowers and more. According the area, it would be the second largest park complex in Stip.

2.9 Sports complex Avtokomanda

The Municipality of Štip in cooperation with public enterprises and CPA - Štip slowly but certainly form horticultural arrangement of the new sports park complex in the neighborhood Avtokomanda in Štip.

Horticultural arrangement of the complex is starting to show a different picture of this former wreck at its location. Planted are several dozen evergreen trees and flowers so that the complex has gained the appropriate design. Situated are a few benches, but more will be followed and workers are already working on another small playground to meet interest and get more room for youth recreation.

Currently work is on the lower part of the complex, which is another form of paving walkway that connects the playground onto the street. The basketball court is already operational and the youth soon find its new place for sports recreation.

3 CONCLUSIONS

Application of making green in the space of residential blocks is very important and is based on knowledge of hygienic - health impact that has making green on quality of life, and cosmetic application in ornamenting the space. Green spaces in cities are one of the basic elements of hygiene city. They have the function of purifying air, recreation and aesthetic function. In complex urban green spaces refreshing act of respiratory organs and the nervous system of the people.

The modern city planning is indicating of connecting the greed open space with different use which includes areas and objects for body training, sport and recreation. Sport occupation and play in nature is becoming more comfort, approachable and predictable. Sport terrains are not isolated any more, only in recreational zones. The green system is connected in living and working areas, in sanitary and education institutions. Sport terrains becoming functional part of living spaces.

6 REFERENCES

- B. Mirkovic, Osnovi urbanizma tehnika prostornog oblikovanja, (1976), Beograd.
- [2] D. Cohen, J. Ashwood, M. Scott, O. Overton, R. Evenson, L. Staten, D. Porter, T. Mckenzie and D. Catellier, Public Parks And Physical Activity Among Adolescent Girls, Pediatrics, Vol.118, (2006), pp.1381-1389.
- [3] D. Kelbaugh, Three Urbanisms and the Public Realm, (2009), London.
- [4] Д. Сугерев, Проблеми на пејзажа, пространството и отдиха, (1971), Софија.
- [5] Д. Сугерев, Градини и паркови, (1960), Софија.
- [6] Д. Сугерев, Планиране и архитектура на населените места, (1958), Софија.
- [7] Л. Тошев, Композиција на современија град, (1972), Софија.
- [8] Л. Стојчев, Парково и ландшафтно искуство, (1961), Софија.
- [9] L. Wirth, Urbanism as a Way of Life, The American Journal of Sociology, volume 44, (1999), London.
- [10] T. Fritz, P. Wandell, H. Aberg, *et al.*, Walking for Exercise - Does Three Times per Week Influence Risk Factors In Type 2 Diabetes?, Diabetes Research and Clinical Practice, Vol.71, (2006), pp.21-27.
- [11] http://www.parkovi.com.mk/default.asp?ItemID=2 B8138684474B54889AEB3B36881CB45
- [12] http://www.stip.gov.mk/index.php/mk/delovniinformacii/javni-pretprijatija/359-2009-12-22-15-35-52