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DECLARATION

I hereby declare that the data given and the documents furnished herewith are correct to the best of my knowledge and belief.

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Title of the Paper	Name of the author's	Department	Name of the Journal	Year of publication	ISSN number
A new family which integrates beta Marshall-Olkin-G and Marshall-Olkin Kumaraswamy-G family of Distributions	Laba Handique	Statistics	Journal of Probability and Statistical Sciences	2018	1726-3328
Traditional Medicines and Women Reproductive Health: An Alternative to Modern Synthetic Drugs	Juli Bairagi	Zoology	Journal of Bioresources.	2019	2394-4315.
Ethnobotanical Study on the Medicinal Plants Used by the Karbi Tribe in Gohpur Sub-division, Biswanath District, Assam	Juli Bairagi	Zoology	International Journal of Emerging Technologies and Innovative Research.	2019	2349-5162.
Effect of various Acid concentrations on seed germination of Sapindusmukorossi Gaertn	Kishor Deka	Botany	Research Journal of Social & Life Sciences	2019	0973-3914
Botanical Identity and Utilitarian Aspects of the 'Best Quality Tejpat' from Northeast India.	Akhil Baruah	Botany	Northeast J. Contemporary Rsearch	2019	2349-3089
From Celluar defenses to Workhorses of Molecular Biology	D.M. Kataki	Biotechnology	The Chemical Axis , Chemical Forum	2019	2249-8842
Bhojpuri Evam Kamrupiya Boliyon ke Lokgeeton ka Tulnatmak Adhyayan	Mizanur Hussain Mondal	Hindi	International Journal of Hindi Research	2019	2455-2232
Pashchimi Asamiya boli aur iski loksanskriti	Mizanur Hussain Mondal	Hindi	JETIR	2019	2349-5162
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The Concept of Environment Protection as Depicted in the Atharvaveda	Mridusmita Bharadwaj	Sanskrit	Thematics Journal of Geography	2019	2277-2995
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The study of the Ancient Temples of Tezpur	Rudrakshi Saikia	Assamese	Palarch's journal of Archaeology,egypt	2020	1567-214x
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Isolation and identification of fungi and bacteria from some spoiled fruits and vegetables	Dipanjali Devi	Botany	Plant archives	2021	0972-5210
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“Symbolistic Significance of Indira Goswami’s Pages stained with Blood”	Chandrasmita Borgohain	English	INTERNATIONAL JOURNAL OF RESEARCH CULTURE SOCIETY	2021	2456-6683
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Problems and prospects of jute industry in Assam: A case study in Assam cooperative jute mill	Sampurna Khound	Economics	Telematique	2023	1856-4194
A study on the impact of COVID-19 in the home-based enterprises in Sonitpur district of Assam, India: Recovery and continuity.	Daisy Rani Kalita	Economics	History Research Journal	2023	0976-5425
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A New Family Which Integrates Beta Marshall-Olkin-G and Marshall-Olkin-Kumaraswamy-G Families of Distributions

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Dibrugarh University *Ball State University*

ABSTRACT A family of continuous probability distributions which integrates recently introduced Marshall-Olkin-Kumaraswamy-G family and Beta Marshall-Olkin-G family of distributions is proposed. Probability density function, cumulative distribution function, moment generating function, moments and probability density function of order statistics of the proposed family are expressed as linear mixture of the corresponding functions of Kumaraswamy-G distribution. The Rényi entropy, quantile function, random sample generation, shapes, reliability and stochastic ordering are studied. Maximum likelihood estimation of parameters and real life data modeling for comparative assessment with immediate sub families are carried out. Different model selection criteria and likelihood ratio test have revealed the advantage of applying the proposed family over its sub families.

Keywords AIC; Exponentiated family; K-S test; Maximum Likelihood; Power Weighted Moments.

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Review article

Traditional Medicines and Women Reproductive Health: An Alternative to Modern Synthetic Drugs

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Abstract: Medicinal plants are rich repository of phytocompounds having the properties to cure various ailments and play pivotal role in the maintenance of health especially among the indigenous people living with the nature. These people have been relying on traditional medicine both plant and animal origin since time immemorial as the modern medical facilities is not easily accessible. The indigenous people explore the nature and natural resources for their livelihood and they acquired tremendous knowledge on the medicinal properties of the natural products. The traditional medicines especially the medicinal plants used by the indigenous people are not only used to cure ailments but also to maintenance and regulation of reproductive health. Certain plant and plant products are used for regulation of women reproductive health by the indigenous tribal peoples around the globe. There are many medicinal plants used traditionally by the indigenous people that have efficacy to regulate reproductive system both in human and domestic animals. This ethno-medicinal information emerged from the age old traditional knowledge system leads to the development of new drugs with lesser or no side effects. Thus traditional medicine become the promising field for the scientists for developing new compounds for improving human health especially female reproductive health without the using synthetic drugs which have several significant side effects. The modern medical

Ethnobotanical Study on the Medicinal Plants Used by the Karbi Tribe in Gohpur Sub-division, Biswanath District, Assam

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Abstract: The use of plants as medicines to cure different types of diseases has been carried on since time immemorial. It is a common practice among the tribal populations in every nook and corner of the globe. The northeastern part of India is one of the major biodiversity hotspots of the world and Assam, one of the 8 states of Northeast India, is regarded as a hub of medicinal plants. Moreover, this state is the abode of a good number of indigenous tribes like Karbi, Bodo, Rabha, Mishing, Deori, Dimasa, Tiwa, etc., who retain an excellent knowledge of herbal medicines inherited through many generations. Though the traditional practices on herbal medicines of different tribes in various locations are studied by many authors, no information on that of the Karbi tribe in Gohpur subdivision is found till date. In the present investigation, informations were collected from the traditional healers of Karbi community in Gohpur area based on personal interview. A total number of 60 species were found which are used for various types of diseases. Most of the plants were known for their medicinal properties as supported by earlier data. However, a detailed study of the phytocompounds of these medicinal plants and their validation in animal models is necessary for further action.

Keywords: Ethnobotany, Traditional Medicine, Karbi Tribe, Gohpur sub- division

I.INTRODUCTION

Ethnobotany includes the scientific study of the relationships between the human folks with the plant resources (Ayem *et al*

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Effect of various Acid concentrations on seed germination of *Sapindus mukorossi* Gaertn

* Khaleda Begum, ** Rulee Laskar,
*** Kishor Deka, **** Pranati Gogoi, *****Namita Nath

Abstract- In the present investigation, an attempt was made to determine the germination efficiency of seeds of Sapindus mukorossi Gaertn. Using three different acids in different concentrations viz. 50%, 70% and 100% of H2SO4, HCl and HNO3. 10 seeds were taken for each concentration and treated with the respective acids for 15 minutes each. In the study highest germination was found to achieve in 100% H2SO4 and 70% HCl. While treating the seeds with 100% HNO3 as well as 70% and 50% H2SO4 germination was nil. This study will be helpful in establishing the potential efficiency of acid in breaking seed dormancy of this significant medicinal plant with low percentage of germination in natural condition.

Key Words- Germination, H2SO4, HCl, HNO3, *Sapindus mukorossi*

Introduction: *Sapindus mukorossi* Gaertn. commonly known as "reetha" or "soapnut" is a highly valuable medicinal plant of the family sapindaceae. It is a deciduous and a perennial tree which is found usually in various places of tropical as well as sub-tropical climatic regions of Asian continent. The fruit is valued for saponins and has been used as a remedy in China and Japan for centuries. The tri-terpenoids extracted from different parts of this plant are

Analysing Impatience in Multiserver Markovian Queues

Document Type : Research Paper

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Abstract

Reneging and Balking are practical aspects of customer impatience. In traditional queuing literature, customer impatience was rarely considered. However, for the last few decades, queuing theorists have been trying to integrate aspect of balking and reneging into modeling of queues. This paper is an extension of the work in the same direction. We consider a multi-server Markovian queuing model under the assumption that customers are state aware and the reneging rates increase as the state of the system goes up. We also assume that the customer may balk with balking probabilities proportional to the state of the system. Under this setup performance measures are derived and presented.

Keywords

Balking ; Impatience ; Qqueuing ; Reneging ; Performance measures

+ References

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Bioinformatics and Artificial Intelligence to Combat Covid-19 and Beyond

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Editorial

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Editorial

COVID-19 perhaps is the greatest and tremendously significant crisis against *Homo sapiens sapiens* in the contemporary history of the globe. The group of coronaviridae includes viruses with very long RNA genomes up to 33000 nucleotides. SARS-CoV-2 belongs to the *Sarbecovirus* provided with approximate genome size of 30000 nucleotides [1]. SARS-CoV-2 has four main structural proteins: spike (S), envelope (E), membrane (M) and nucleocapsid (N). Additionally some other non-structural proteins are encoded in the pp1a and pp1ab polyproteins, for SARS-CoV-2 which is in use to develop rapid reaction to the need for fast detection, understanding and treatment of COVID-19. To control the on-going COVID-19 pandemic, it is of utmost importance to get an insight into the evolution and pathogenesis of the virus. Hufsky F, et al. [7] has been attempting to project and cover bioinformatics workflows and tools for the routine detection of SARS-CoV-2 infection, analysis of sequencing data, the tracking of the COVID-19 pandemic and evaluation of containment measures, evolutionary study of Coronavirus evolution, the discovery

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Journal of Nanotechnology and Nanomaterials Research Article

In Silico Proteome Analysis of Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)

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Highlights

- *In silico* sequence-based and structure-based functional characterization of the full SARS-CoV-2 proteome
- Reports sequence data mining and analysis, complete coordinate tertiary structure prediction and Machine Learning inspired validation of SARS-CoV-2 proteins

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Plant Extracts as Potential Acaricides for the Management of Red Spider Mite, *Oligonychus coffeae* Nietner (Acarina: Tetranychidae), in the Tea Ecosystem: An Eco-Friendly Strategy

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The effects of the application of aqueous extracts of a selection of five traditional plants (*Murraya paniculata*, *Cassia tora*, *Amphineuron opulentum*, *Tithonia diversifolia*, and *Cassia alata*) were compared with that of synthetic acaricide in reducing the population of red spider mite (*Oligonychus coffeae*), a major tea pest, alongside their impact on natural enemies and green leaf yield. Analysis of large-scale field trials showed that all the five plants extract treatments resulted in similar yield; this was analogous to the application of synthetic acaricide. A reduction in the pest population was observed to be on par with the synthetic acaricide, with a higher number of natural enemies treated using the pesticide-plant-treated plot in comparison to the synthetic acaricide-treated plot, which indicated pesticidal plants had a lower impact on natural enemies. A phytotoxicity study on tea leaves indicated that aqueous extracts of selected plants are non-phytotoxic and do not impart any taint to the prepared tea samples. Therefore, the present investigation outlines how plant extracts used as a botanical pesticide display toxicity against red spider mite on tea plants without harming the beneficial insects, increasing the yield and avoiding any lethal consequence for the tea plants or consumers.

Keywords: pesticidal plants, tea, red spider mite, phytotoxic effect, natural enemies

INTRODUCTION

Tea, *Camellia sinensis* (L.) O. Kuntze, is a perennial plantation crop and requires warm humid weather for ample growth and production. Such climate conditions also house a diverse range of insect pests and diseases that attack this crop, which turns them into a limiting factor for the production of tea (Hazarika et al., 2009; Majumder et al., 2012). The red spider mite, *Oligonychus coffeae* Nietner (Acarina: Tetranychidae), is among the foremost tea pests in India (Somchoudhury et al., 1995; Babu, 2010; Barua et al., 2016), and it causes the loss of up to 35–40% of the crop (Sundararaju and Sundara Babu, 1999; Hazarika et al., 2009). The tea plant's mature leaves are attacked by the veins and the mid-rib; finally, the whole leaf is affected. In cases of severe infestation, the tender foliage may also become damaged (Rau, 1965; Jeppson et al., 1975). The red spider mite feeds on the leaf epidermis by constantly puncturing it using their chelicerae (Jeppson et al., 1975; Babu, 2010). This pest remains active throughout the year, and unhindered infestation leads to

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Review Article Open Access

Agricultural Pest Management with Plant-Derived Nanopesticides: Prospects and Challenges

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A NEW EXTENSION OF THE MARSHALL-OLKIN KUMARASWAMY-G FAMILY OF DISTRIBUTIONS: ITS PROPERTIES AND APPLICATIONS WITH FAILURE TIME DATA

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Abstract

This paper introduces a new family of continuous probability distributions called the Marshall-Olkin Kumaraswamy-G Poisson family of distribution. Some of its mathematical properties including explicit expressions for the order statistics,

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Analysis and Model Validation of Right Censored Survival Data with Complementary Geometric-Topp-Leone-G Family of Distributions

Laba Handique, Khaoula Aidi, Subrata Chakraborty, I. Elbatal and M. Masoom Ali

Abstract

A family of continuous probability distributions, namely the Complementary Geometric-Topp-Leone-G family constructed here, is proposed by using Topp-Leone-G distribution as the baseline distribution in the complementary geometric-G construction. This family has recently been formulated from the family from Marshall-Olkin-G. Here we investigate some new aspects of this family. A stochastic genesis of the family is provided, asymptotes and shapes studied analytically. The parameter estimation for right censored data by method of maximum likelihood and goodness-of-fit tests based on the proposed model is developed. The estimation and testing are validated through extensive simulation experiments. Real life modeling of right censored data is presented.

Keywords: Censored data, Topp-Leone distribution, Estimation, Simulation, Goodness-of-fit, Stochastic formulation.

Mathematics Subject Classification: 60E05, 62G05, 62G20.