

SKRIPSI

**KARAKTERISTIK DARAH BEBERAPA VARIASI KERBAU
RAWA PAMPANGAN DI KECAMATAN RAMBUTAN
KABUPATEN BANYUASIN SUMATERA SELATAN**



**NETTA PERMATA SARI
08111004016**

**FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
UNIVERSITAS SRIWIJAYA
2015**

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**KARAKTERISTIK DARAH BEBERAPA VARIASI
KERBAU RAWA PAMPANGAN DI KECAMATAN
RAMBUTAN KABUPATEN BANYUASIN
SUMATERA SELATAN**

**Diajukan untuk memenuhi salah satu syarat memperoleh gelar
Sarjana Sains Bidang Studi Biologi Pada Fakultas Matematika Dan Ilmu
Pengetahuan Alam Universitas Sriwijaya**



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08111004016**

**JURUSAN BIOLOGI
FAKULTAS MATEMATIKA DAN ILMU PENGETAHUAN ALAM
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2015**

HALAMAN PENGESAHAN

**KARAKTERISTIK DARAH BEBERAPA VARIASI KERBAU
RAWA PAMPANGAN DI KECAMATAN
RAMBUTAN KABUPATEN BANYUASIN
SUMATERA SELATAN**

SKRIPSI

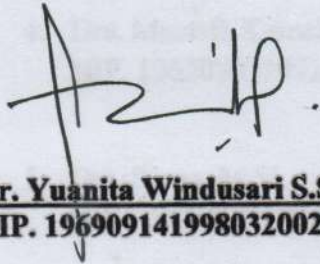
Diajukan Untuk Melengkapi Salah Satu Syarat Memperoleh Gelar
Sarjana Sains Ilmu Biologi

OLEH :

**NETTA PERMATA SARI
08111004016**

Indralaya, April 2015

Pembimbing I



**Dr. Yuanita Windusari S.Si., M.Si.
NIP. 196909141998032002**

Pembimbing II



**Drs. Erwin Nofvan M.Si.
NIP. 195611111986031002**

**Mengetahui,
Ketua Jurusan Biologi**



**Drs. Hanifa Marisa M.S
NIP. 196405291991021001**

HALAMAN PERSETUJUAN

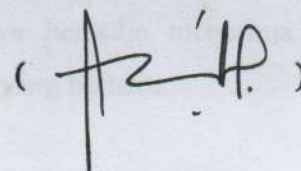
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Indralaya, April 2015

Tim penguji karya tulis ilmiah berupa Skripsi

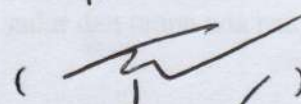
Ketua :

1. Dr. Yuanita Windusari S.Si., M.S.i
NIP. 196909141998032002

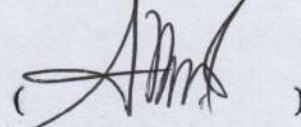
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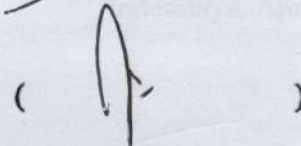
2. Drs. Erwin Nofyan M.Si.
NIP. NIP. 195611111986031002

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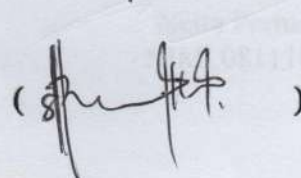
3. Dr. Arum Setiawan M.Si.
NIP. 19721122 199803 1 001

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4. Drs. Mustafa Kamal M.Si.
NIP. 196207091992031005

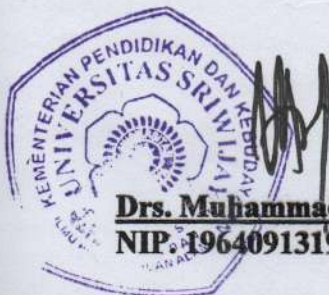
()

5. Drs. Sarno, M.Si.
NIP. 196507151992031004

()

Mengetahui,
Dekan FMIPA UNSRI

Ketua Jurusan Biologi FMIPA UNSRI



Drs. Muhammad Irfan, M.T
NIP. 196409131990031003

()

Drs. Hanifa Marisa, M.S
NIP. 196405291991021001

HALAMAN PERNYATAAN INTEGRITAS PUBLIKASI

Yang bertanda tangan dibawah ini :

Nama : Netta Permata Sari

NIM : 08111004016

Judul : Karakteristik Darah Beberapa Variasi Kerbau Rawa Pampangan di
Kecamatan Rambutan Kabupaten Banyuasin Sumatera Selatan

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Inderalaya, April 2015

Netta Permata Sari
NIM. 08111004016

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Yang bertanda tangan dibawah ini :

Nama : Netta Permata Sari

NIM : 08111004016

Judul : Karakteristik Darah Beberapa Variasi Kerbau Rawa Pampangan di
Kecamatan Rambutan Kabupaten Banyuasin Sumatera Selatan

Memberikan izin kepada Pembimbing dan Universitas Sriwijaya untuk mempublikasikan hasil penelitian saya untuk kepentingan akademik apabila dalam waktu 1 (satu) tahun tidak mempublikasikan karya penelitian saya. Dalam kasus ini saya setuju untuk menempatkan Pembimbing sebagai penulis korespondensi (Corresponding author)

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Inderalaya, April 2015

Netta Permata Sari
NIM. 08111004016

RINGKASAN

KARAKTERISTIK DARAH BEBERAPA VARIASI KERBAU RAWA PAMPANGAN DI KECAMATAN RAMBUTAN KABUPATEN BANYUASIN SUMATERA SELATAN

Karya tulis ilmiah berupa Skripsi, April 2015

Netta Permata Sari; Dibimbing oleh Yuanita Windusari dan Erwin Nofyan

xiv +, 43 Halaman 7 Tabel, 12 Gambar, 6 lampiran

RINGKASAN

Kabupaten Banyuasin memiliki topografi 80% berupa wilayah datar yang terdiri oleh dataran lahan rawa pasang surut dan rawa lebak, sedangkan 20% lagi berombak sampai bergelombang berupa lahan kering. Kabupaten Banyuasin memiliki suhu rata - rata 26 - 27 °C dan kelembaban relatif 69,4% - 85,5% dengan rata-rata curah hujan 2.723 mm/tahun. Pengamatan karakteristik darah dari beberapa variasi kerbau rawa di Kecamatan Rambutan Kabupaten Banyuasin Provinsi Sumatera Selatan dilakukan pada bulan November 2014 sampai Maret 2015 di laboratorium Fisiologi Hewan, Jurusan Biologi Fakultas Matematika dan Ilmu Pengetahuan Alam, Universitas Sriwijaya, dengan tujuan untuk mengamati dan menganalisis karakteristik darah (sel darah merah dan sel darah putih) dari beberapa variasi kerbau rawa Pampangan. Penelitian ini diharapkan dapat memberikan informasi awal dan gambaran morfologi serta jumlah sel darah merah (eritrosit) dan sel darah putih (leukosit) kerbau rawa pampangan. Penelitian ini dilakukan dengan metode hemositometer untuk menghitung jumlah sel darah, dan metode two slide untuk mengamati morfologi sel darah. Hasil menunjukkan jumlah eritrosit pada kerbau rawa variasi hitam sebanyak $10.18 \times 10^6 /\text{mm}^3$, kerbau rawa variasi Lampung $8.945 \times 10^6 /\text{mm}^3$, kerbau rawa variasi belang $8.250 \times 10^6 /\text{mm}^3$, dan pada kerbau rawa variasi Merah $9.155 \times 10^6 /\text{mm}^3$. Jumlah leukosit pada kerbau rawa variasi hitam sebanyak $27 \times 10^3 /\text{mm}^3$, kerbau rawa variasi Lampung $25.2 \times 10^3 /\text{mm}^3$, kerbau rawa variasi belang $19.6 \times 10^3 /\text{mm}^3$, dan pada kerbau rawa variasi Merah $23.6 \times 10^3 /\text{mm}^3$ dan didapatkan gambaran morfologi sel darah terdiri dari eritrosit, leukosit (Neutrofil, Basofil, Eosinofi, Limfosit dan Monosit). Berdasarkan hasil penelitian didapatkan kesimpulan (1) Jumlah eritrosit tertinggi dimiliki kerbau rawa variasi hitam sebanyak $10.18 \times 10^6 /\text{mm}^3$, diikuti variasi merah sebanyak $9.155 \times 10^6 /\text{mm}^3$, kerbau rawa variasi lampung sebanyak $8.945 \times 10^6 /\text{mm}^3$, dan jumlah terendah pada kerbau rawa variasi belang sebanyak $8.250 \times 10^6 /\text{mm}^3$. (2) Jumlah leukosit tertinggi dimiliki kerbau rawa variasi hitam sebanyak $27 \times 10^3 /\text{mm}^3$, diikuti jumlah leukosit pada kerbau rawa variasi lampung $25.2 \times 10^3 /\text{mm}^3$, kerbau rawa variasi belang sebanyak $19.6 \times 10^3 /\text{mm}^3$, dan jumlah terendah kerbau rawa variasi merah sebanyak $23.6 \times 10^3 /\text{mm}^3$. (3) Morfologi eritrosit dari empat variasi kerbau rawa berbentuk bikonkaf dengan diameter 7,5 μm . (4) Morfologi neutrofil kerbau rawa variasi hitam dan lampung tergolong kelompok II (neutrofil segmen) sedangkan

pada kerbau rawa variasi belang dan merah neutrofil tergolong kelompok I (neutrofil batang). (5) Limfosit pada kerbau rawa dari ke empat variasi termasuk kedalam limfosit kecil karena hanya mempunyai ukuran 5 μm sampai 7,5 μm .

Kata Kunci : Kerbau Rawa Pampangan, Eritrosit, Leukosit.
Kepustakaan : 55 (1980 – 2014).

68 + 43 pages, 1 table, 24 images, 3 attachments

District of Banyuwangi has a topography of 80% in the form of a flat region comprising the plains of tidal wetlands and lowland swamp, whereas 20% more swampy to undulating form of dry land districts. Banyuwangi have average temperature 26-27 °C and a relative humidity of 89.4% - 93.5% with an average rainfall of 2.723 mm/year. Observations blood characteristics of some variations of the district swamp buffalo district kabupaten banyuwangi-South Sumatra conducted in November 2014 through January 2015 in the laboratory of Animal Physiology, Department of Biology, Faculty of Mathematics and Natural Sciences, University of Sriwijaya, Indonesia, with the purpose to observe and analyze the characteristics blood (red blood cells and white blood cells) from swamp buffalo Pampangan area variation contained in District Kabupaten Banyuwangi, South Sumatra. This study is expected to provide initial information of hematological as well as the number of red blood cells (erythrocytes) and white blood cells (leukocytes) swamp buffalo Pampangan. This study was conducted using a hemacytometer to count the number of blood cells, and through of two slides to observe the morphology of blood cells. The Results of the number of erythrocytes in swamp buffalo black variation of as much as $10.5 \times 10^6 / \text{mm}^3$, swamp buffalo white variation $8.94 \times 10^6 / \text{mm}^3$, swamp buffalo striped variation $8.256 \times 10^6 / \text{mm}^3$, and the swamp buffalo Red variation $9.125 \times 10^6 / \text{mm}^3$. The number of leukocytes in swamp buffalo black variation of $27 \times 10^3 / \text{mm}^3$, swamp buffalo striped variation $25.2 \times 10^3 / \text{mm}^3$, swamp buffalo white variation $19.6 \times 10^3 / \text{mm}^3$, and the swamp buffalo Red variation $23.6 \times 10^3 / \text{mm}^3$ and it was observed blood cell morphology consisting of erythrocytes, leukocytes (neutrophils, Basophils, Eosinoff, Lymphocytes and platelets). Based on the result, it was concluded (1) The highest number of erythrocytes in swamp buffalo black variation as much as $10.5 \times 10^6 / \text{mm}^3$, followed by red variation as much as $9.125 \times 10^6 / \text{mm}^3$, variation of swamp buffalo striped variation as much as $8.94 \times 10^6 / \text{mm}^3$ and the lowest number in swamp buffalo of striped variation as many as $8.256 \times 10^6 / \text{mm}^3$. (2) The number of leukocytes highest swamp buffalo black variation of as much as $27 \times 10^3 / \text{mm}^3$, followed by the number of leukocytes in swamp buffalo striped variation as much as $25.2 \times 10^3 / \text{mm}^3$, swamp buffalo white variation as much as $19.6 \times 10^3 / \text{mm}^3$ and the lowest number in swamp buffalo of Red variation as much as $23.6 \times 10^3 / \text{mm}^3$.

SUMMARY

SOME VARIATION CHARACTERISTICS OF BLOOD SWAMP BUFFALO IN DISTRICT RAMBUTAN PAMPANGAN BANYUASIN SOUTH SUMATRA

Scientific papers in the form of thesis, February 2015

Netta Permata Sari; Supervised by Dr. Yuanita Windusari S.SI., M.Si and
Drs. Erwin Nofyan M.Sc.

xii + 47 pages, 1 table, 24 images, 8 attachments

District of Banyuasin has a topography of 80% in the form of a flat region comprising the plains of tidal wetlands and lowland swamp, whereas 20% more choppy to undulating form of dry land. district of Banyuasin have average temperature 26-27 ° C and a relative humidity of 69.4% - 85.5% with an average rainfall of 2,723 mm / year. Observations blood characteristics of some variations in the district swamp buffalo district rambutan banyuasin South Sumatra conducted in November 2014 through January 2015 in the laboratory of Animal Physiology, Department of Biology, Faculty of Mathematics and Natural Sciences, University of Sriwijaya, Indralaya, with the purpose to observe and analyze the characteristics blood (red blood cells and white blood cells) from swamp buffalo Pampangan some variation contained in District Rambutan Banyuasin, South Sumatra. This study is expected to provide initial information and morphological as well as the number of red blood cells (erythrocytes) and white blood cells (leukocytes) swamp buffalo pampangan. This study was conducted using a hemocytometer to count the number of blood cells, and methods of two slides to observe the morphology of blood cells. The Results shows the number of erythrocytes in swamp buffalo black variation of as much as $10.18 \times 10^6 / \text{mm}^3$, swamp buffalo variation lampung $8945 \times 10^6 / \text{mm}^3$, swamp buffalo striped variations $8,250 \times 10^6 / \text{mm}^3$, and the swamp buffalo Red variation $9155 \times 10^6 / \text{mm}^3$. The number of leukocytes in swamp buffalo black variation of $27 \times 10^3 / \text{mm}^3$, swamp buffalo lampung variation $25.2 \times 10^3 / \text{mm}^3$, swamp buffalo striped variation $19.6 \times 10^3 / \text{mm}^3$, and the swamp buffalo Red variation $23.6 \times 10^3 / \text{mm}^3$. and it was shown blood cell morphology consisting of erythrocytes, leukocytes (neutrophils, Basophils, Eosinofi, lymphocytes and monocytes). Based on the result, it was concluded (1) The highest number of erythrocytes owned swamp buffalo black variations as much as $10:18 \times 10^6 / \text{mm}^3$, followed by red variation as much as $9155 \times 10^6 / \text{mm}^3$, variations of swamp buffalo lampung as much as $8945 \times 10^6 / \text{mm}^3$, and the lowest number in the swamp buffalo of striped variation as many as $8,250 \times 10^6 / \text{mm}^3$. (2) The number of leukocytes highest swamp buffalo black variation of as much as $27 \times 10^3 / \text{mm}^3$, followed by the number of leukocytes in swamp buffalo lampung variation $25.2 \times 10^3 / \text{mm}^3$, swamp buffalo striped variations as much as $19.6 \times$

