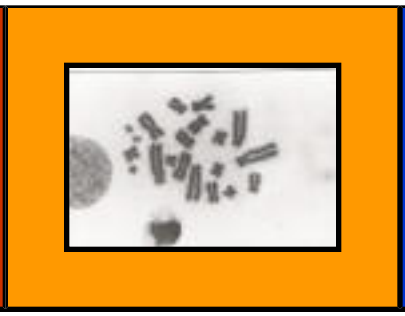
Interspecific Karyotyping:

Mystery at the Zoo!

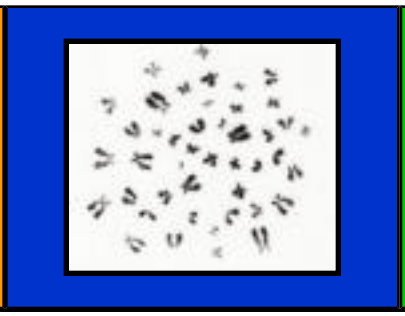
As a research assistant in the zoo genetics lab, it is your job to figure out which species possesses each of the chromosome spreads you see below. You will print out one spread (by number) and cut them out and pair them to decipher to which species they belong. Once you have your spread complete, get it approved by your instructor who will then give you the key to which you can compare your finished karyotype.

Also, some have chromosomes that are laying on top of each other, making cutting difficult. When this happens, you must print 2 copies of the spread so that every chromosome is accounted for. You must only cut out one copy of each chromosome if you print more than one copy of your spread due to chromosome overlap. It helps to count them before you cut them out.

 # 1

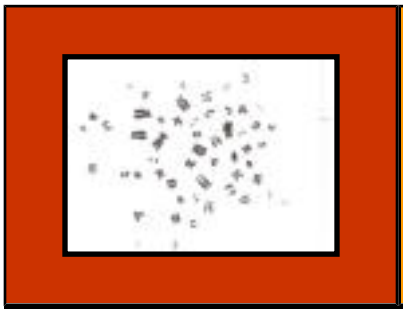


 # 2



 # 3

 # 4

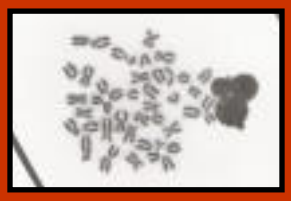


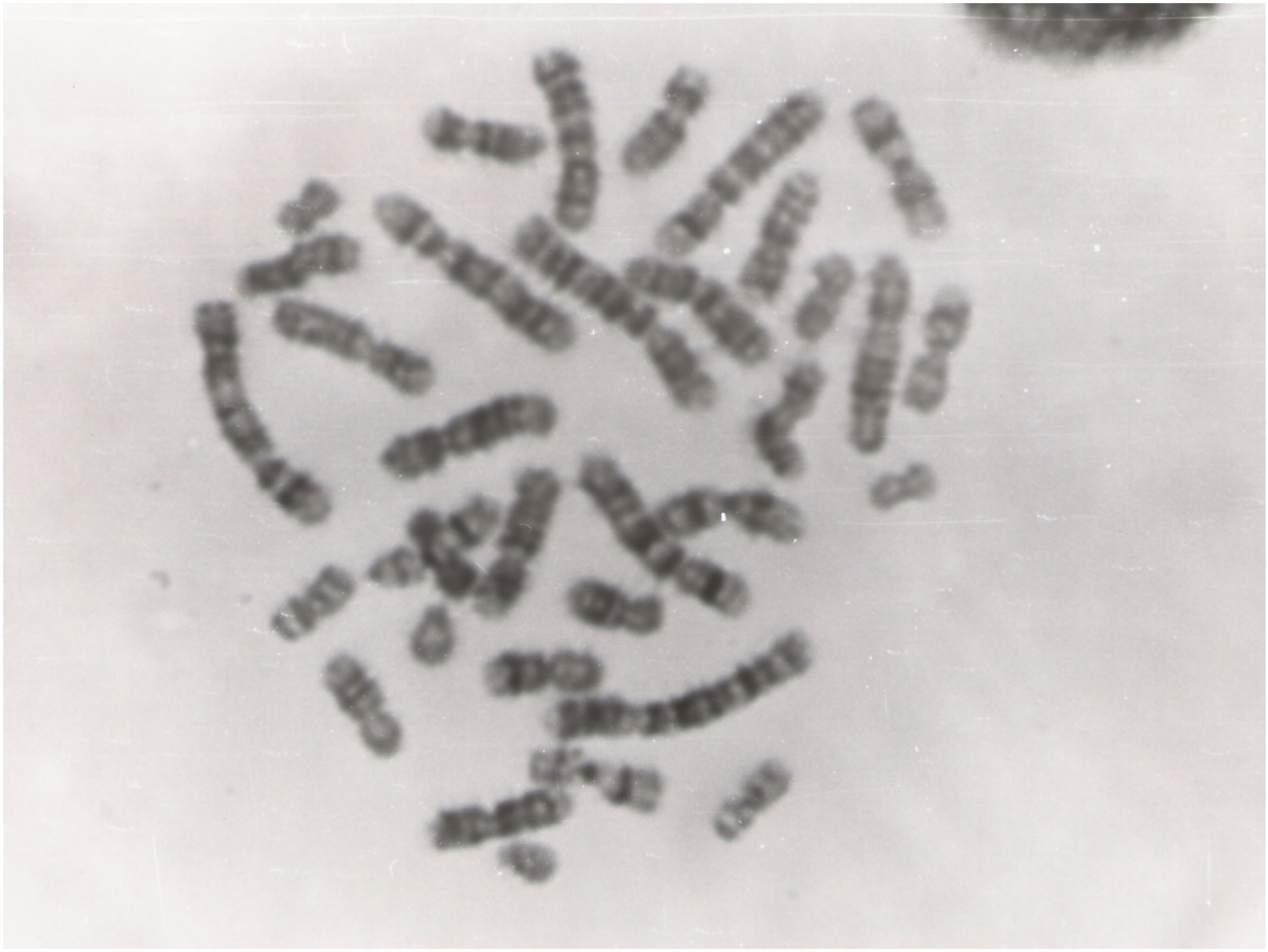
 # 5

 # 6

 # 7

 # 8

#9	#10	#11	#12
			
#13	#14	#15	#16
			
#17	#18	#19	#20

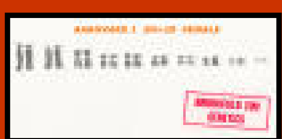
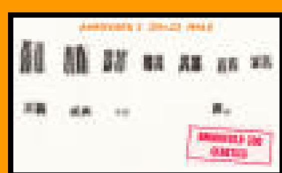
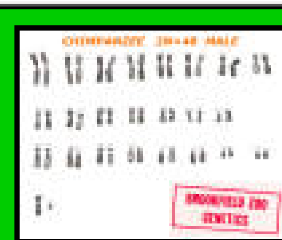
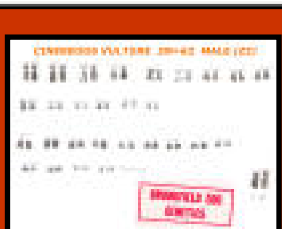
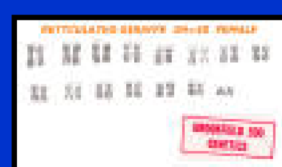
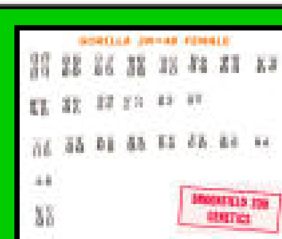
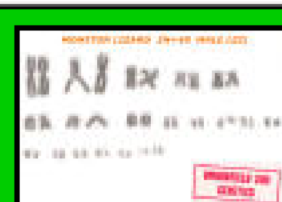


Interspecific Karyotyping:

Putting the Pieces Together!

Take the karyotypes you have just gotten approved by your instructor, and compare them to the following completed karyotypes. You may click on any picture below for a larger image. When finished, write the following information along the top of your card:

Species name   Diploid # (2N)   Gender

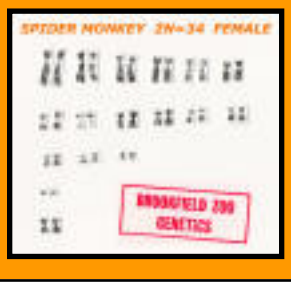
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype
			
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype
			
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype
			
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype

Arranged Karyotype

Arranged Karyotype

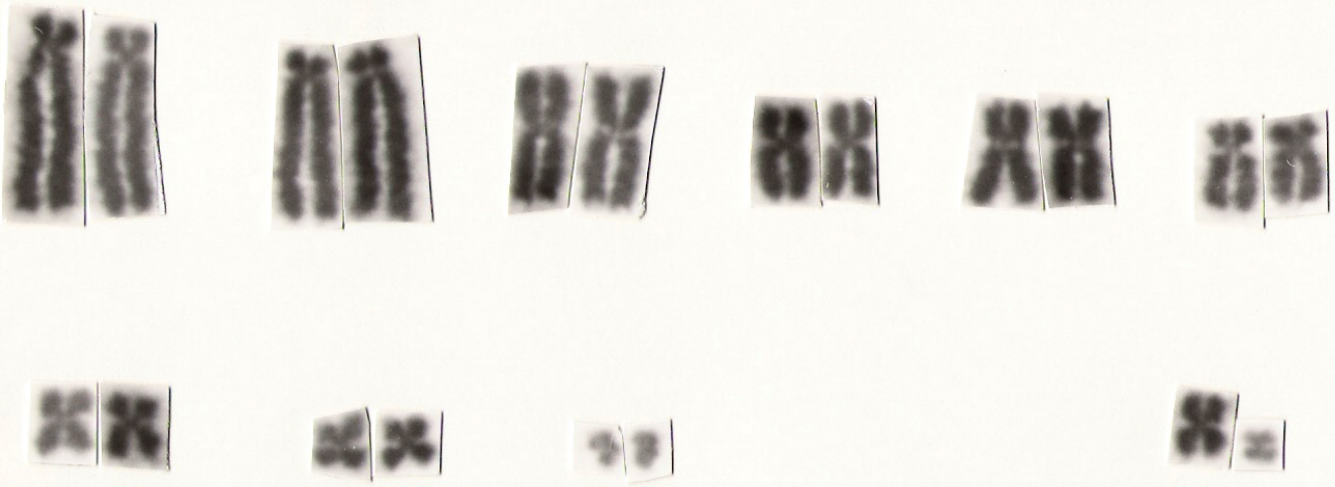
Arranged Karyotype

Arranged Karyotype

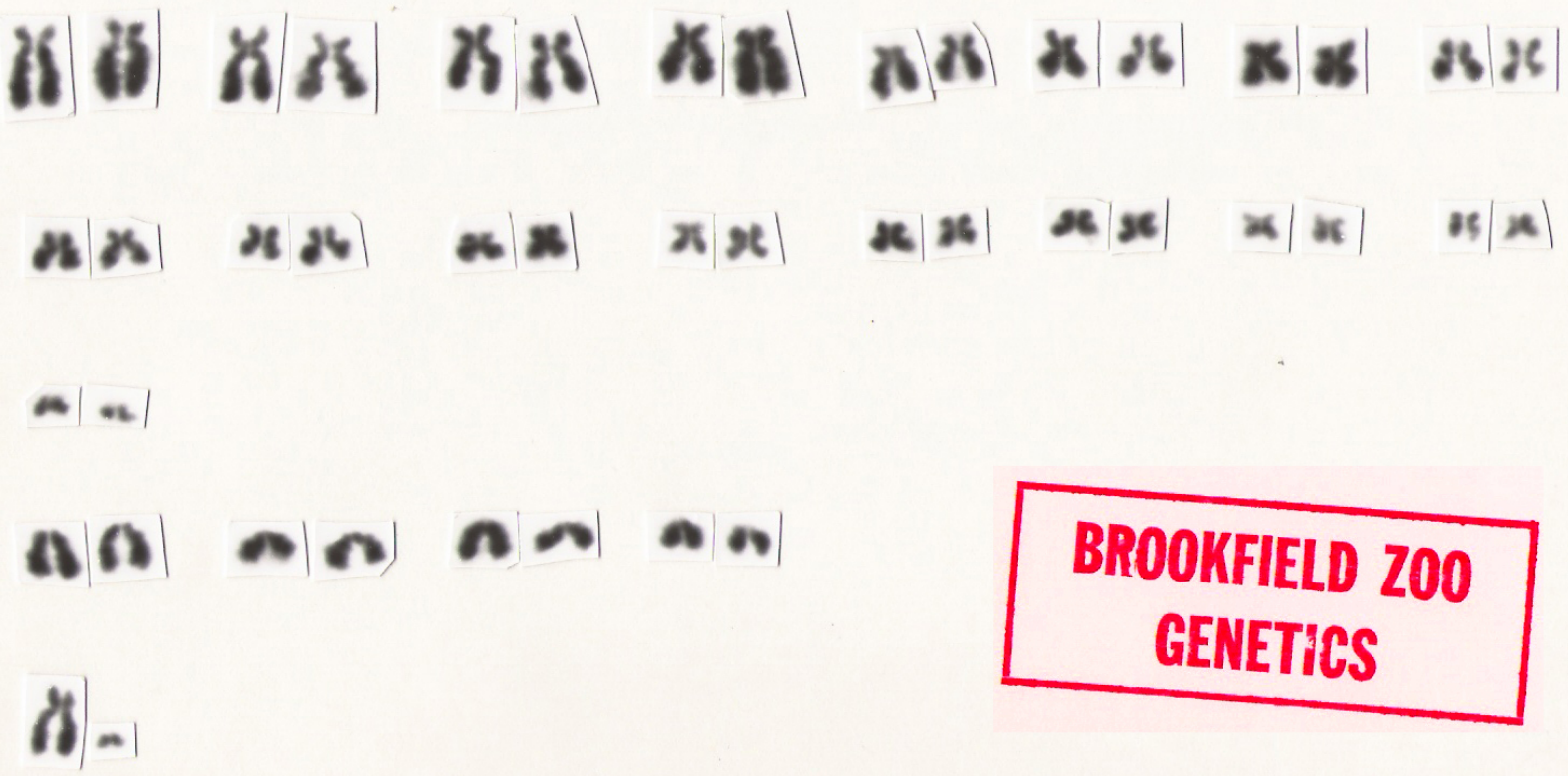


AARDVARK 1 2N=20 FEMALE

AARDVARK 2 2N=20 MALE

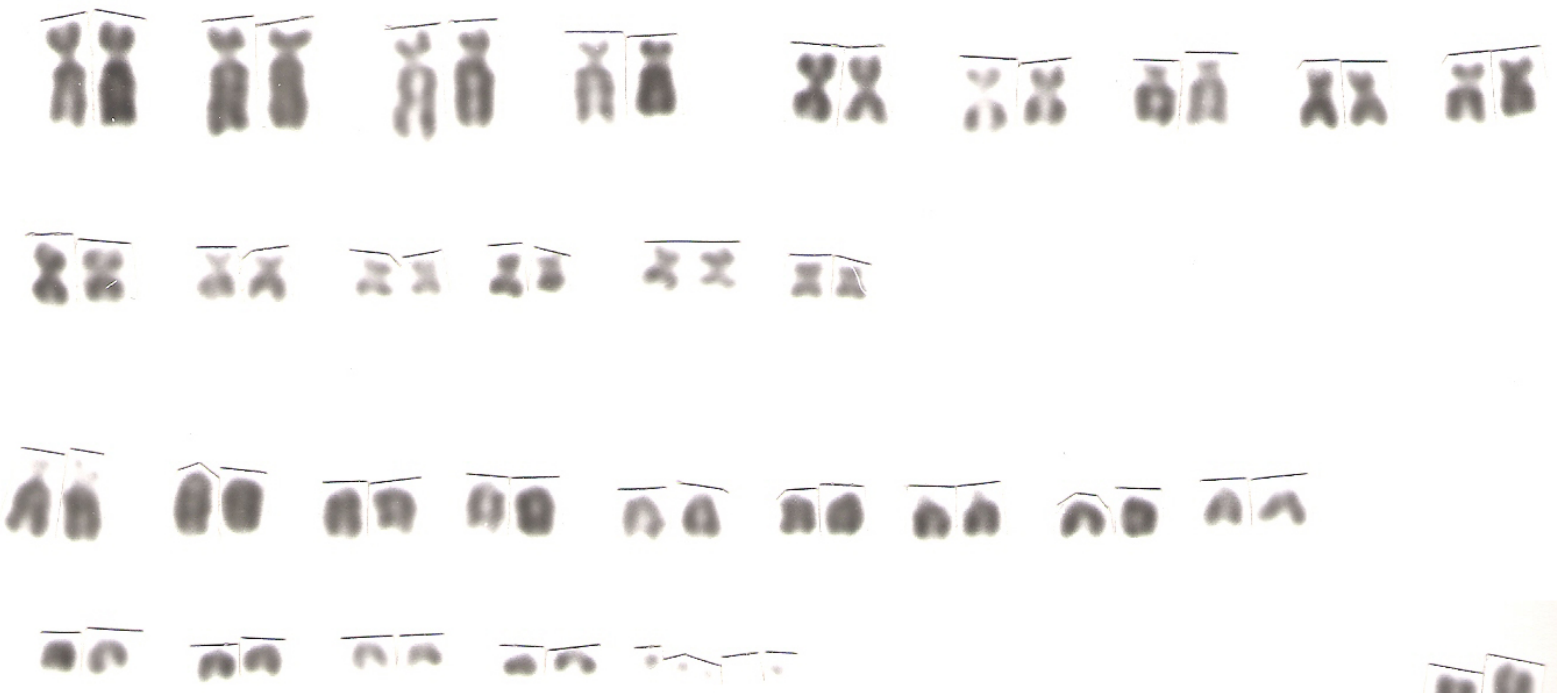


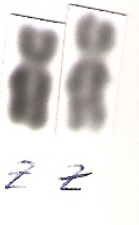
BELUGA 2N=44 MALE



CHIMPANZEE 2N=48 MALE

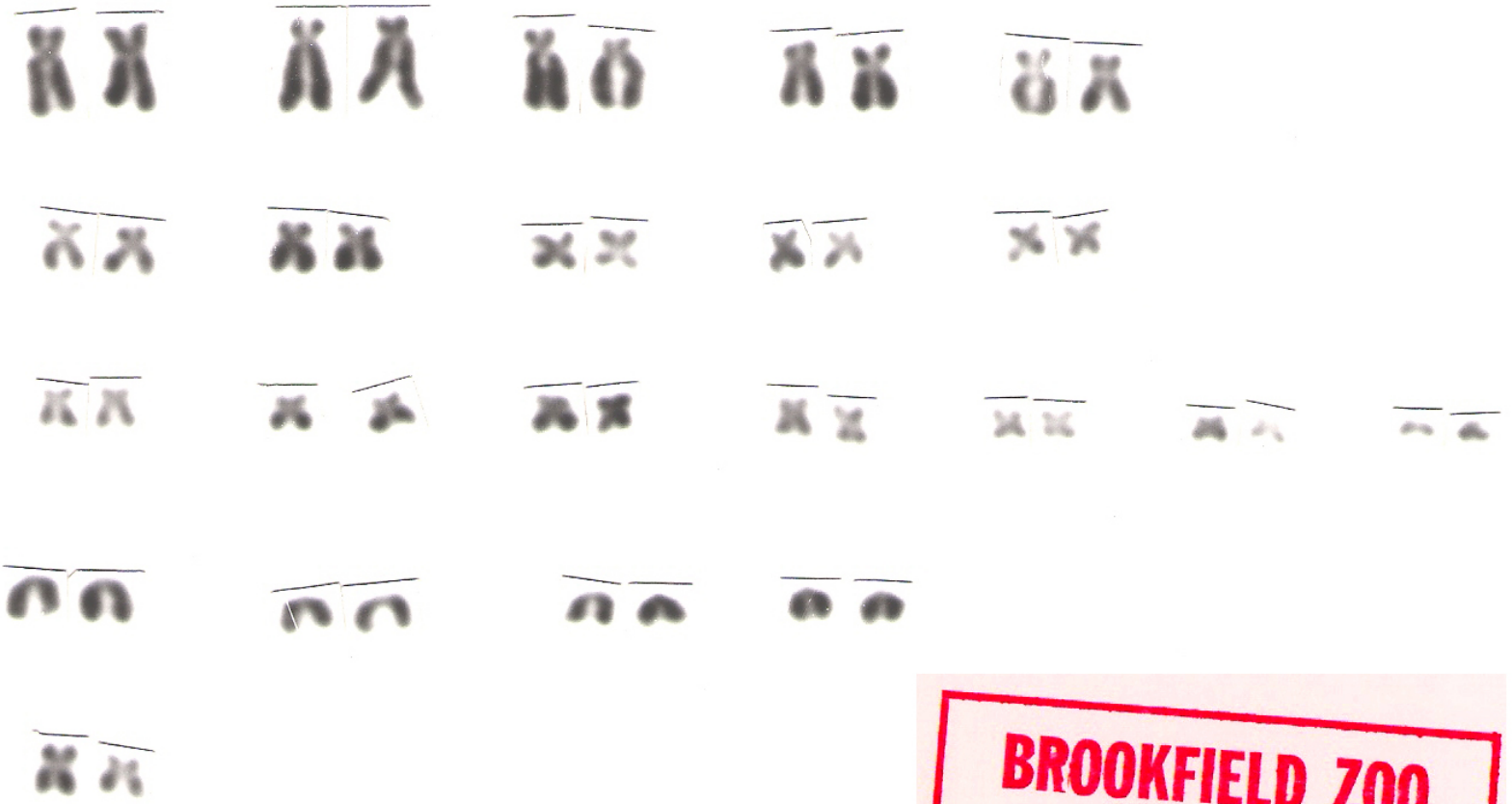
CINEREOUS VULTURE 2N=62 MALE (ZZ)





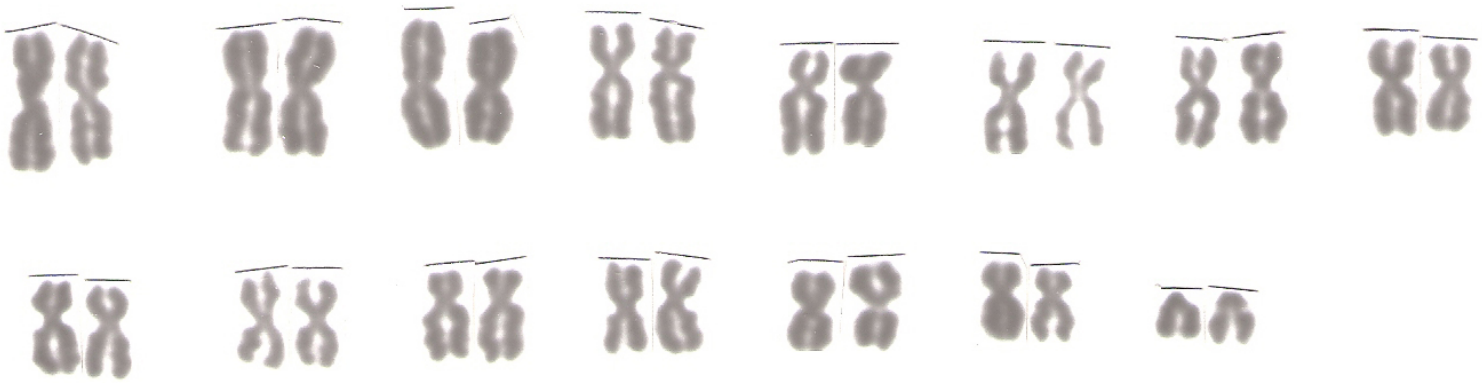
Z Z

BOTTLENOSE DOLPHIN 2N=30 FEMALE



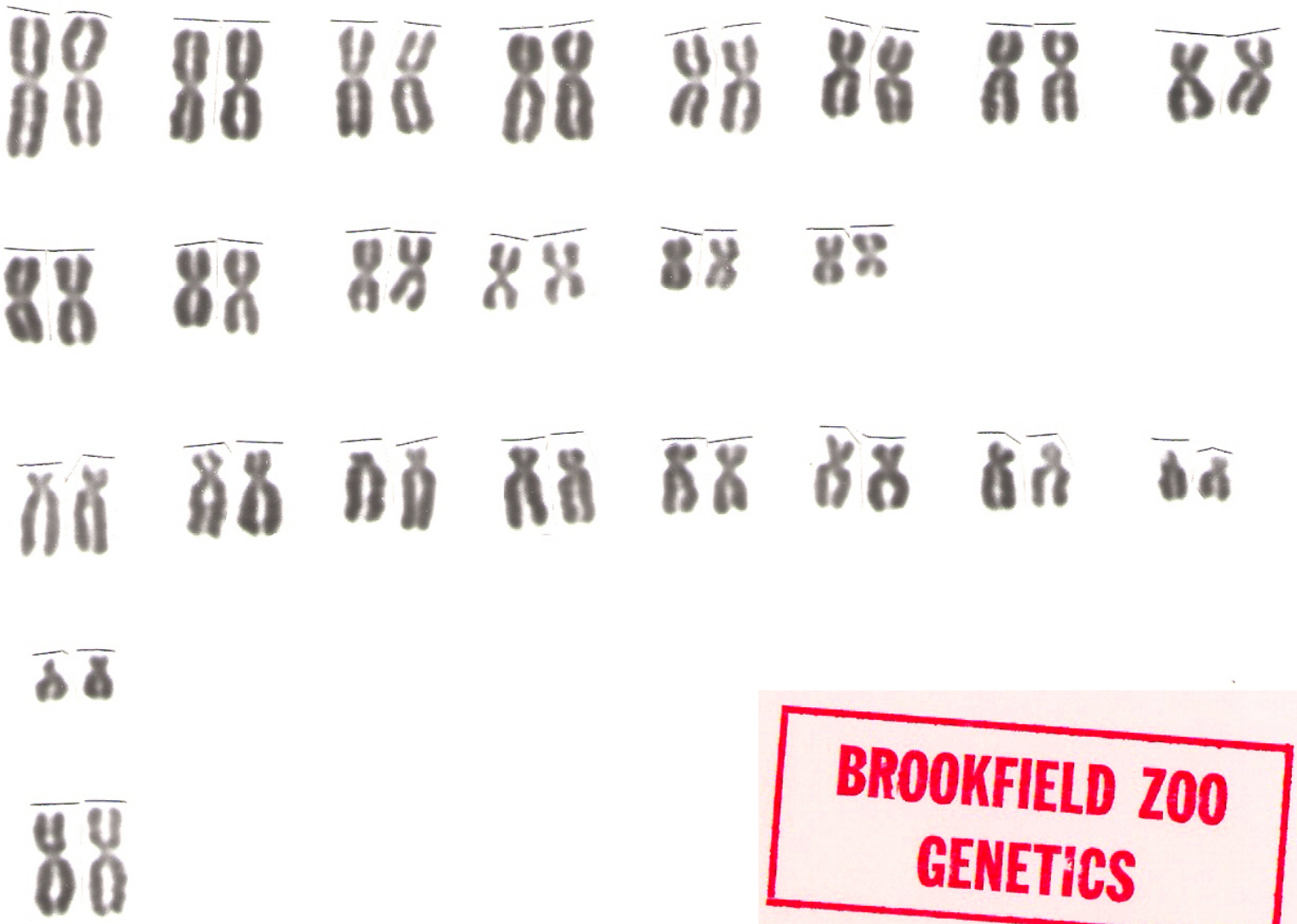
BROOKFIELD ZOO
GENETICS

RETICULATED GIRAFFE 2N=30 FEMALE



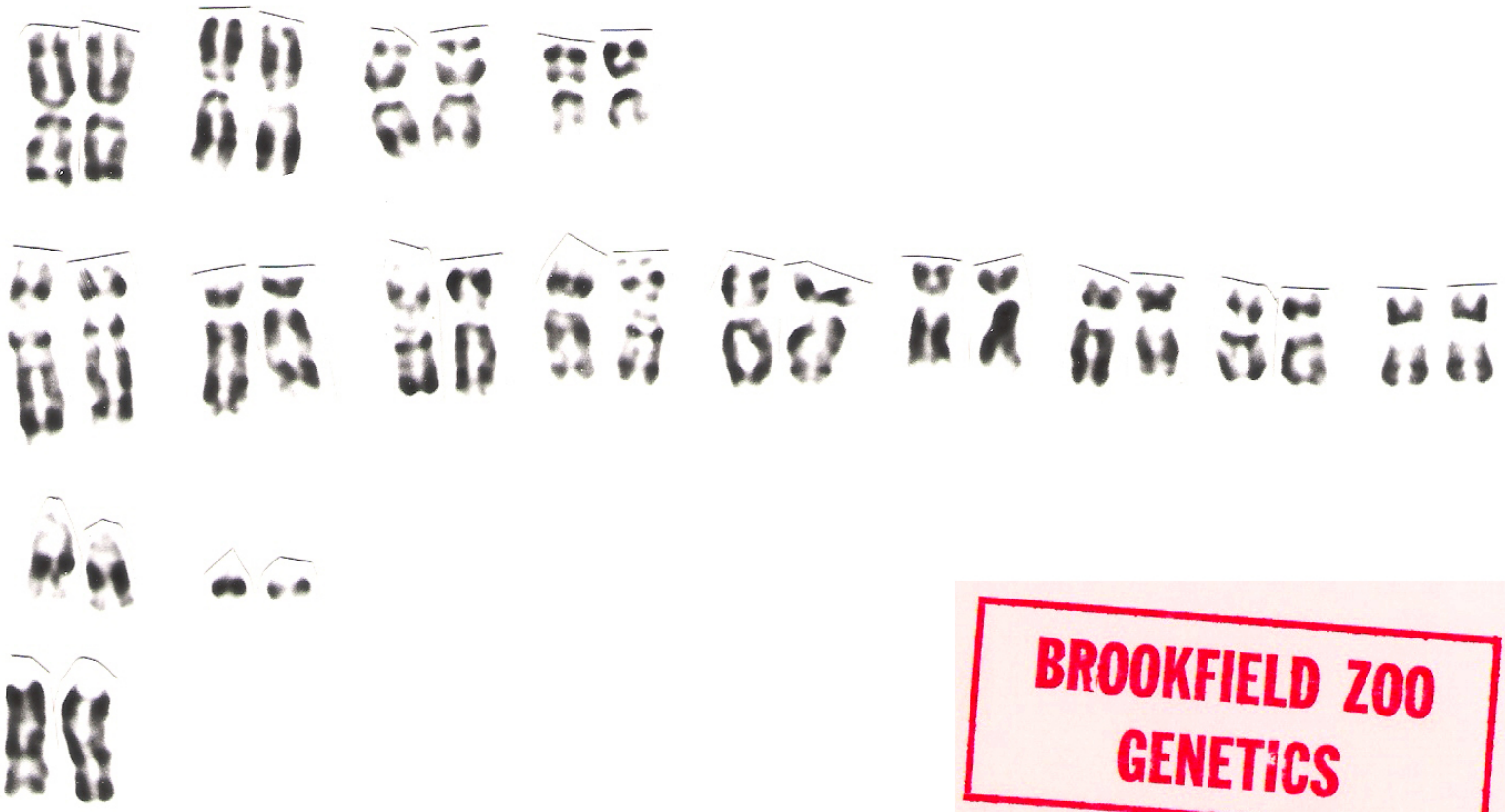
BROOKFIELD ZOO
GENETICS

GORILLA 2N=48 FEMALE

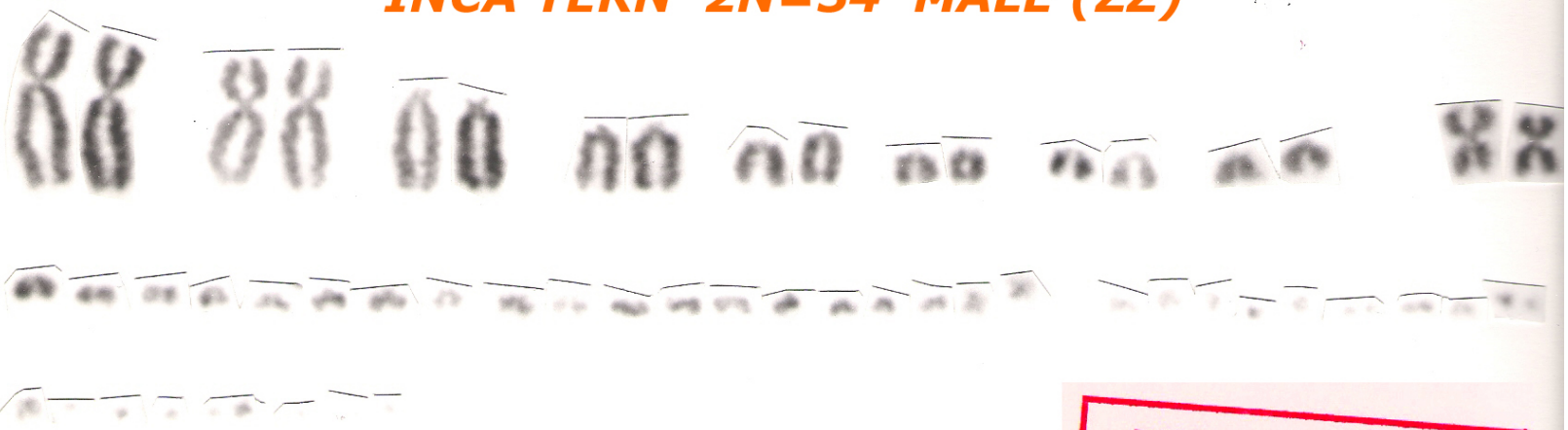


BROOKFIELD ZOO
GENETICS

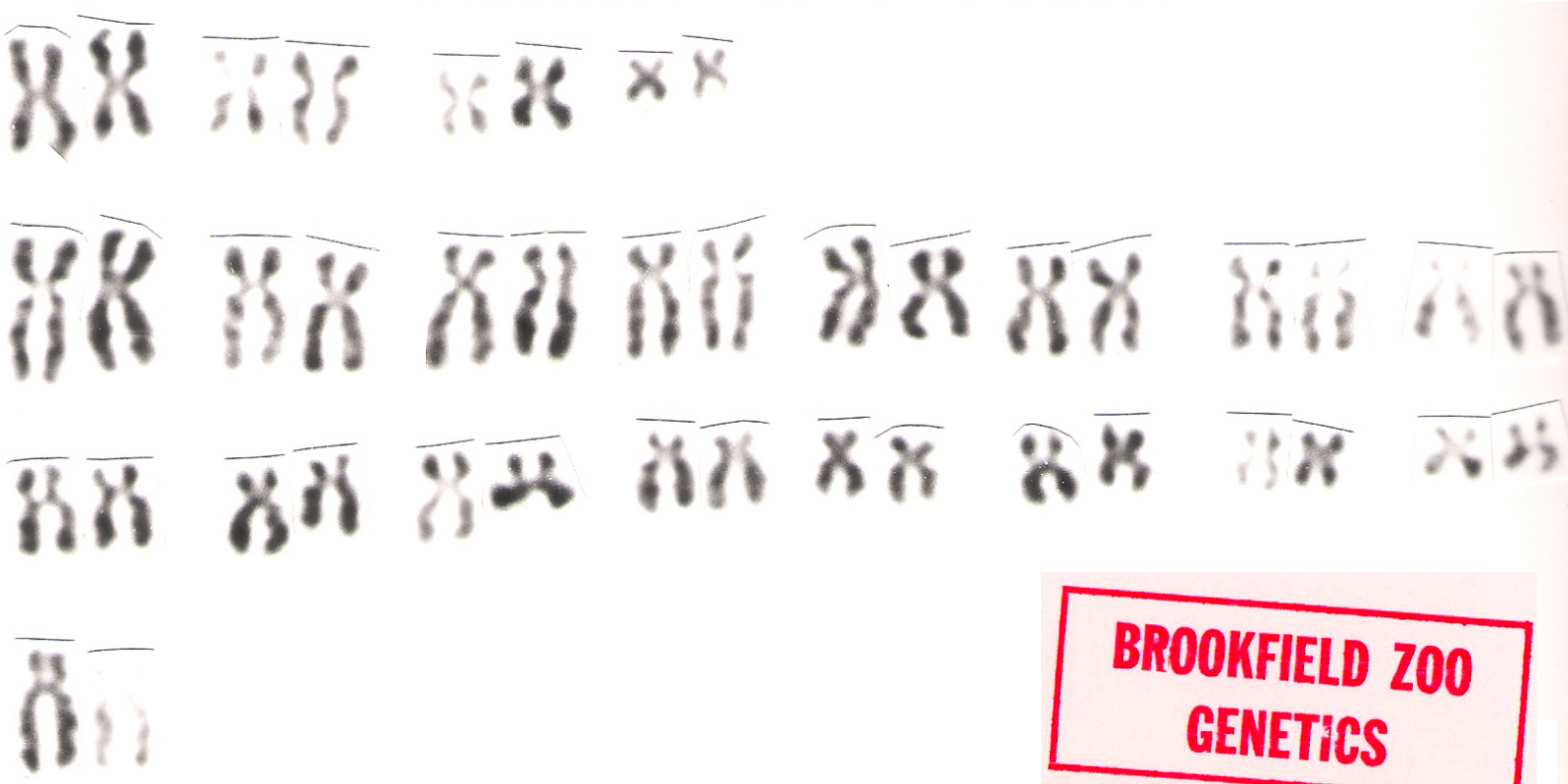
KUDU 2N=32 FEMALE



INCA TERN 2N=54 MALE (ZZ)

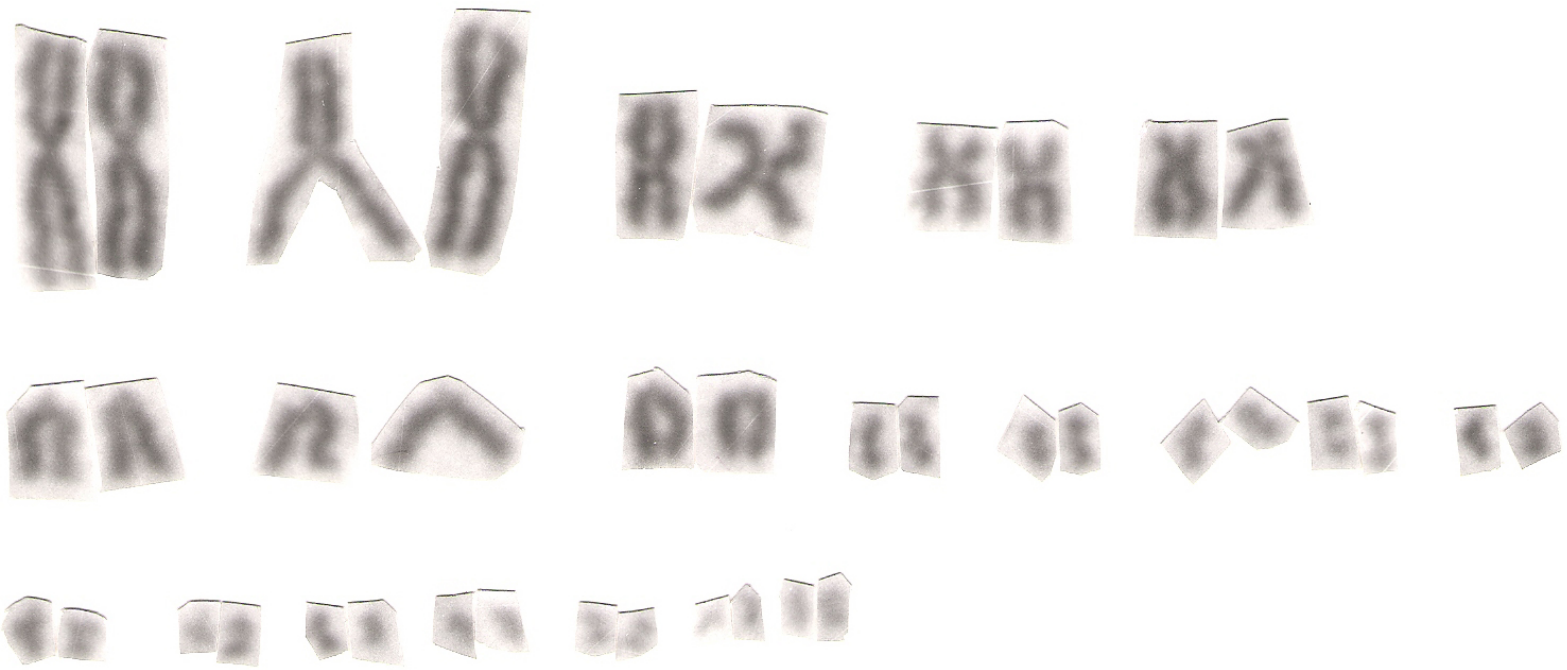


MANDRILL 2N=42 FEMALE

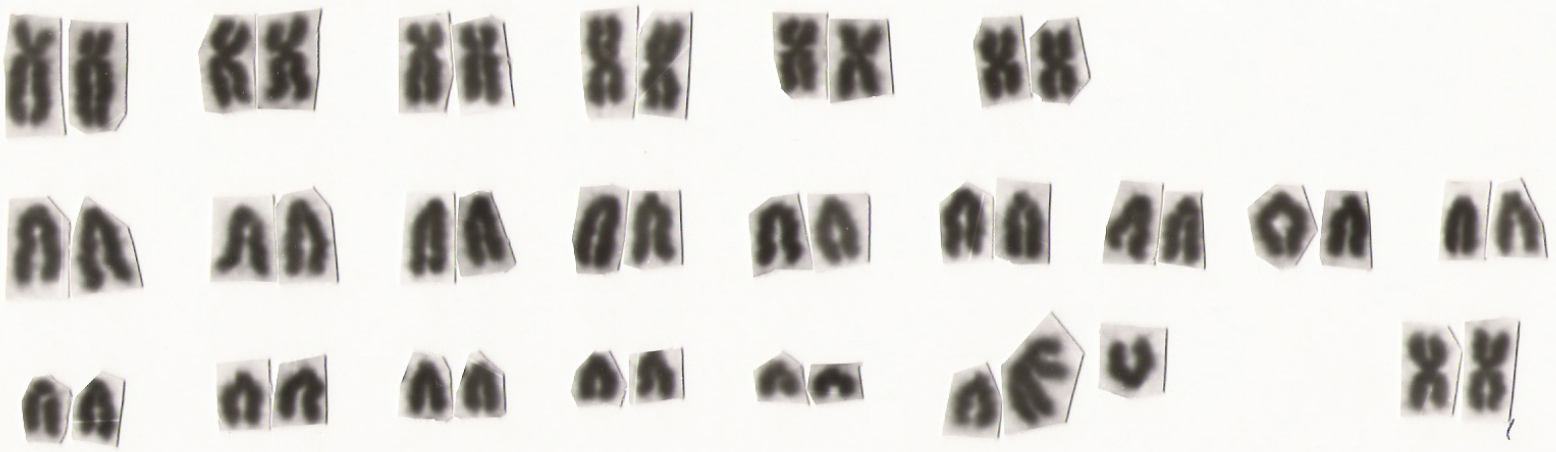


BROOKFIELD ZOO
GENETICS

MONITOR LIZARD 2N=40 MALE (ZZ)



OKAPI 2N=45 FEMALE

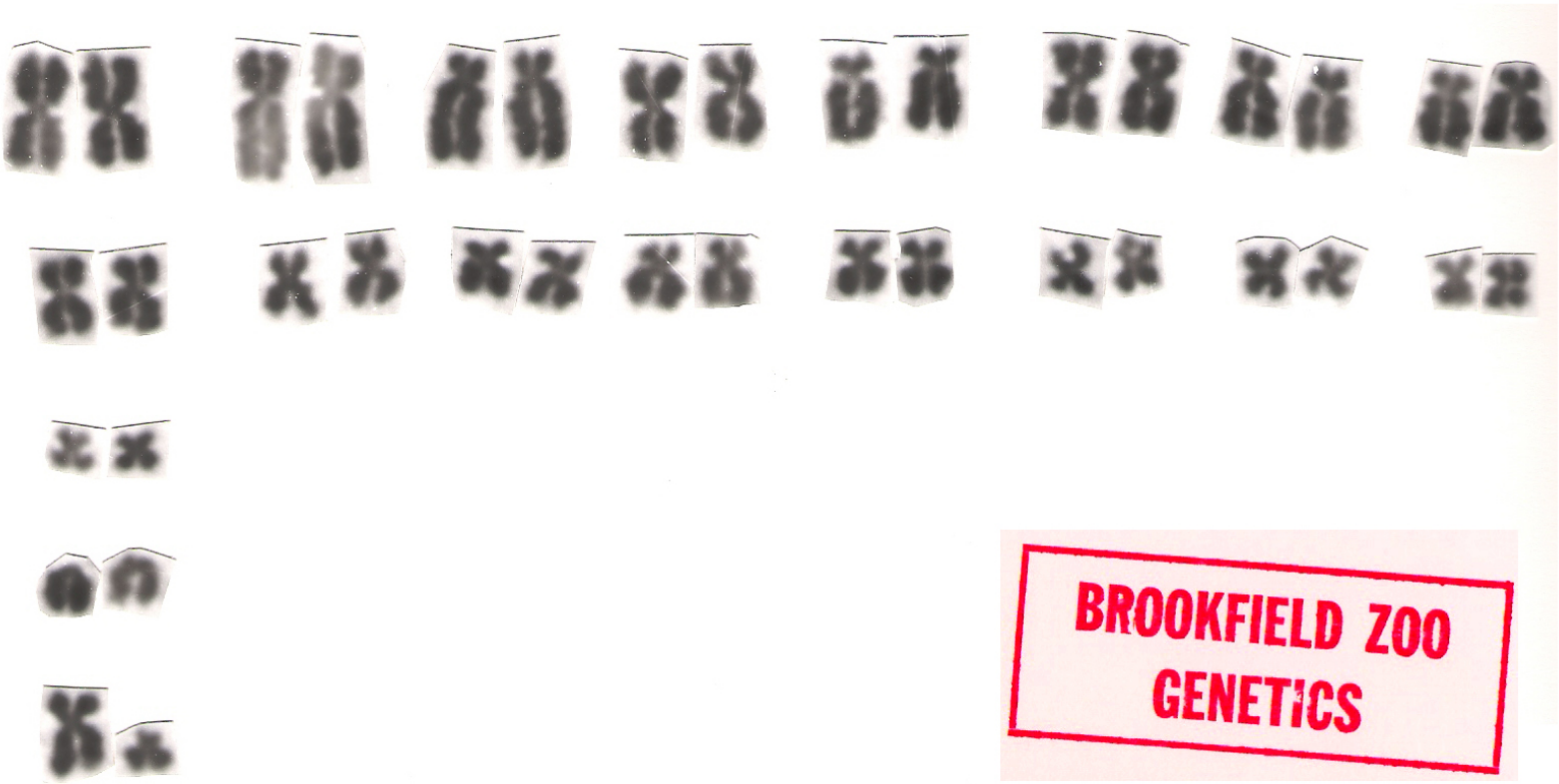


BROOKFIELD ZOO
GENETICS

ORANGUTAN 2N=48 MALE

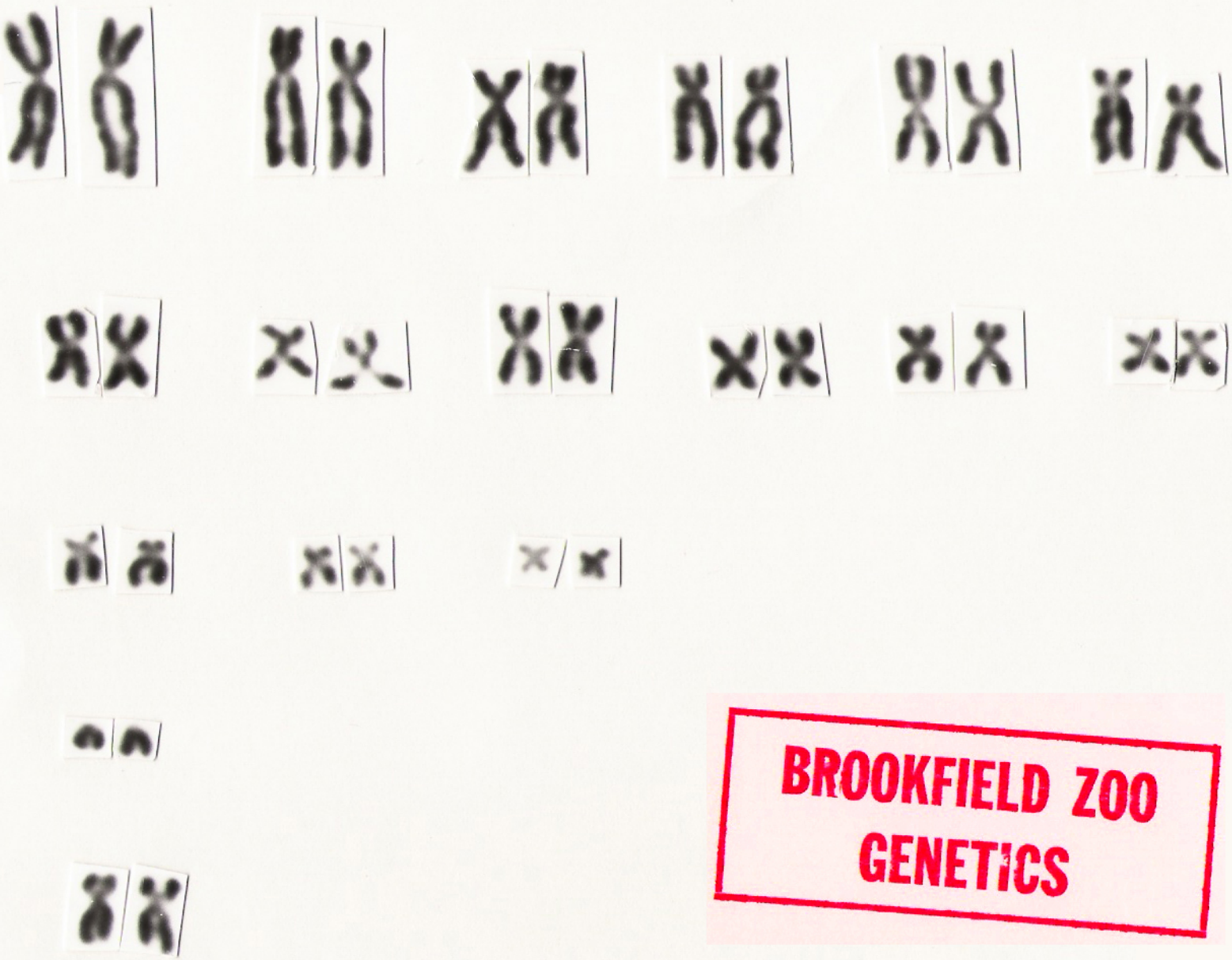
BROOKFIELD ZOO
GENETICS

PALLAS CAT 2N=38 MALE

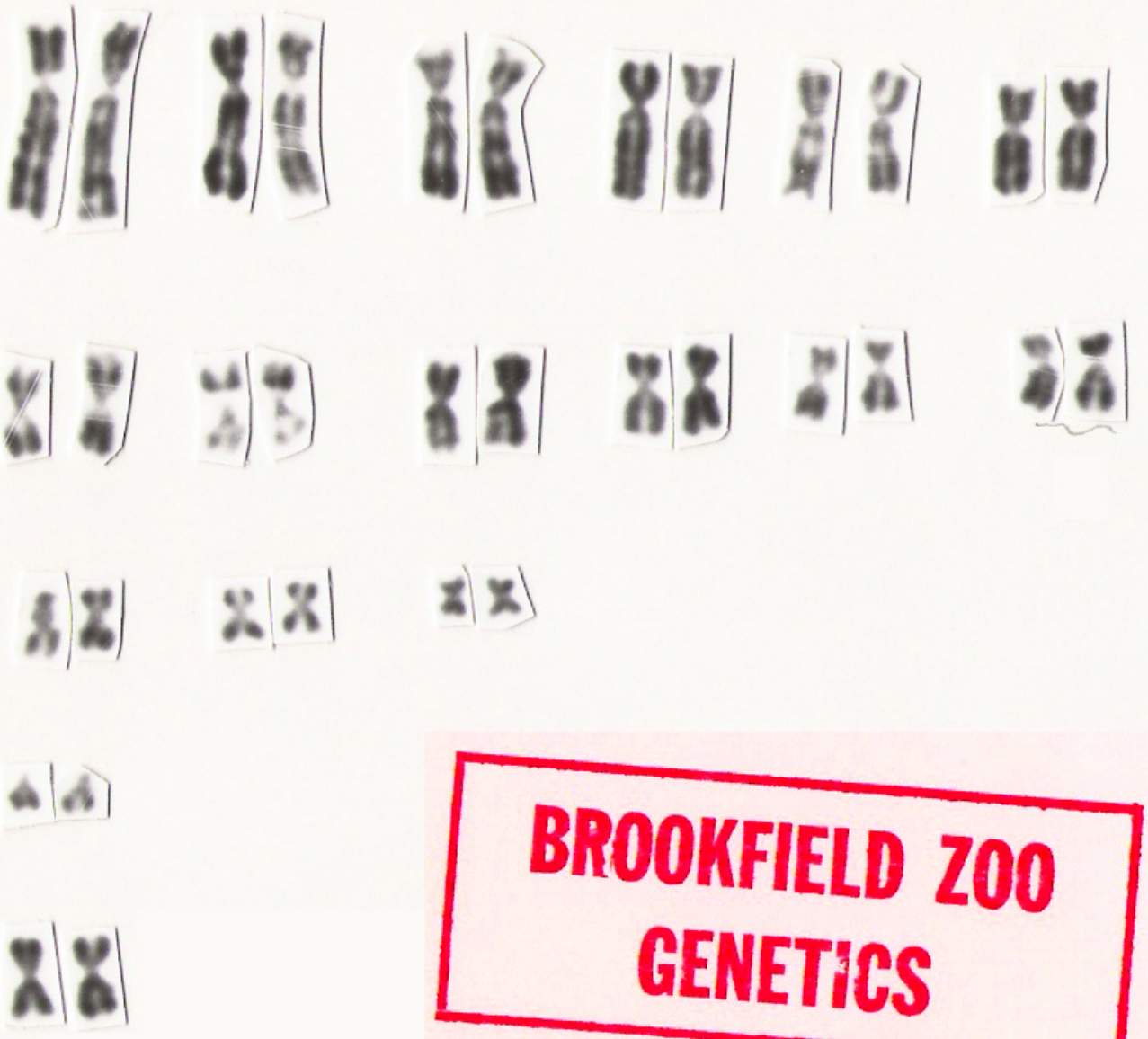


SPIDER MONKEY 1 2N=34 FEMALE

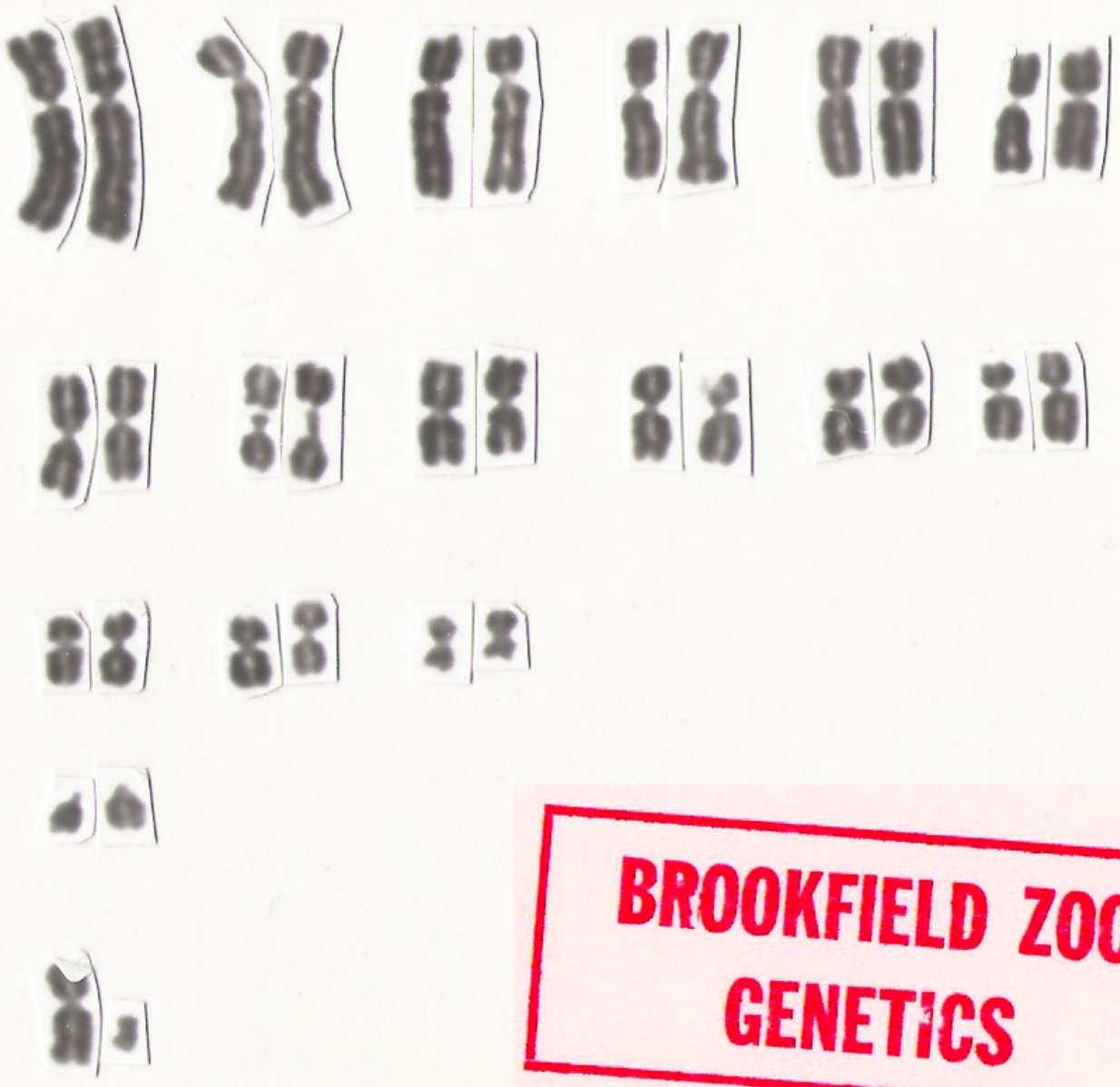
SPIDER MONKEY 2 2N=34 FEMALE



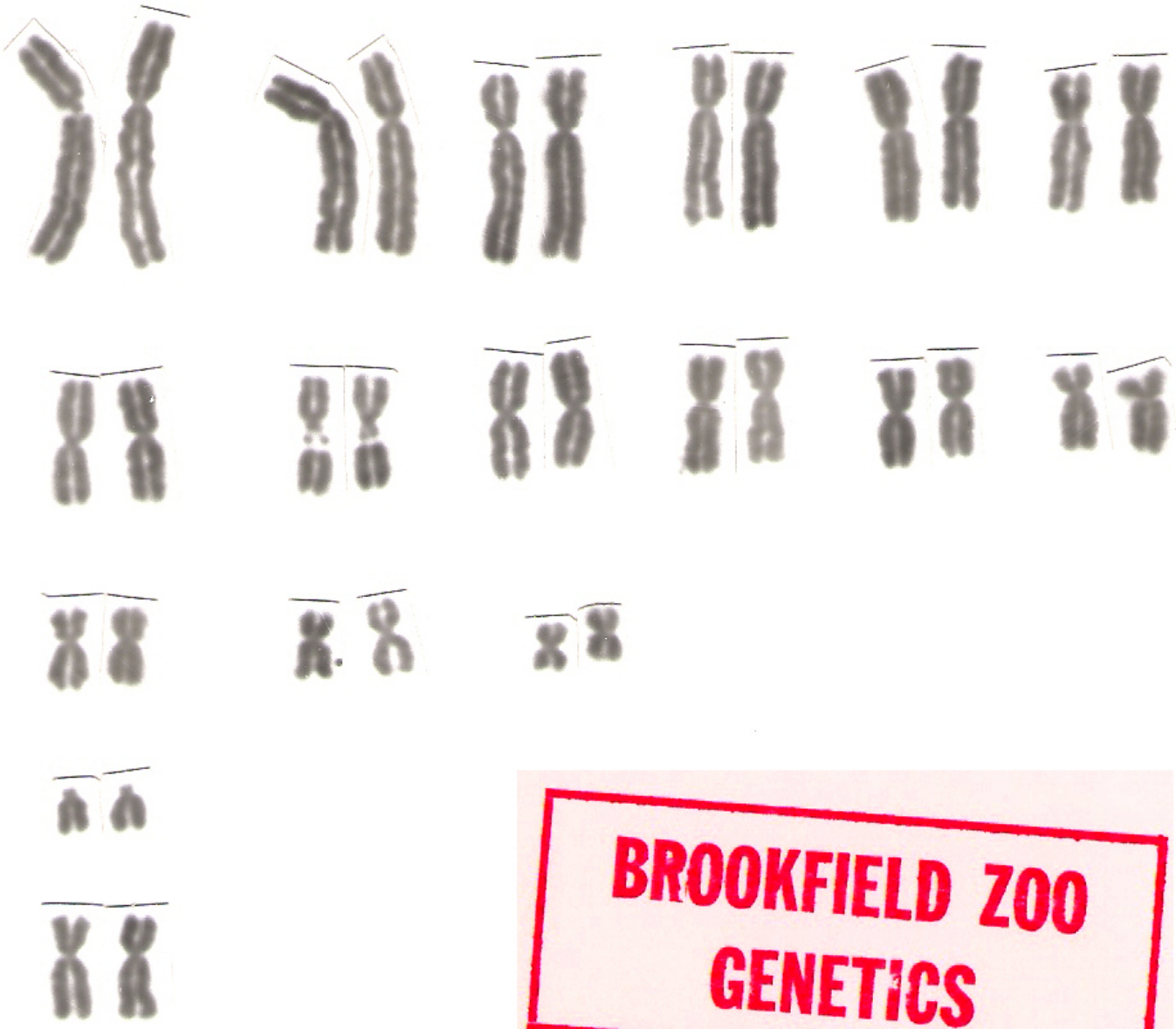
SPIDER MONKEY 2N=34 FEMALE



SPIDER MONKEY 4 2N=34 MALE



SPIDER MONKEY 5 2N=34 FEMALE



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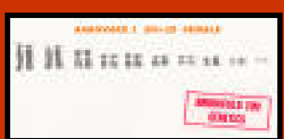
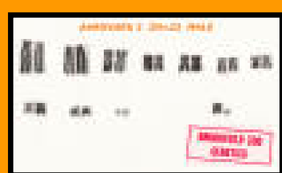
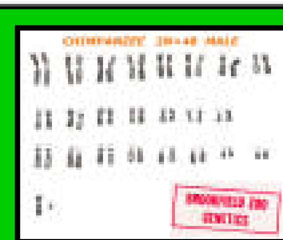
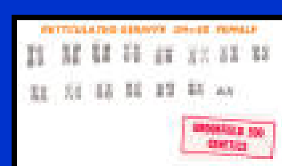
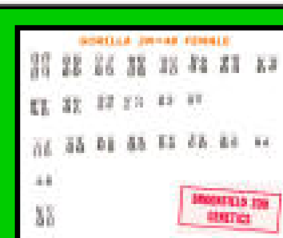
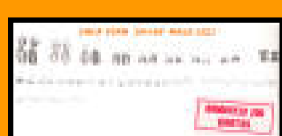
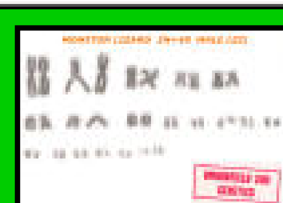
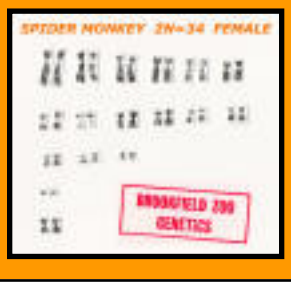
			
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype
			
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype
			
Arranged Karyotype	Arranged Karyotype	Arranged Karyotype	Arranged Karyotype

Arranged Karyotype

Arranged Karyotype

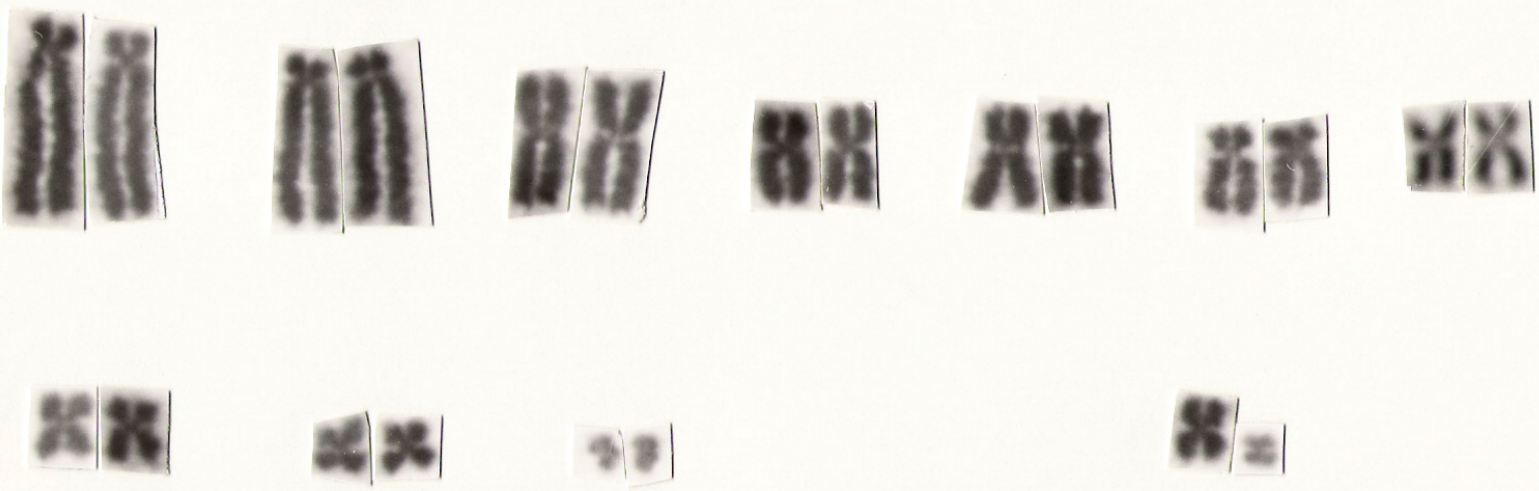
Arranged Karyotype

Arranged Karyotype

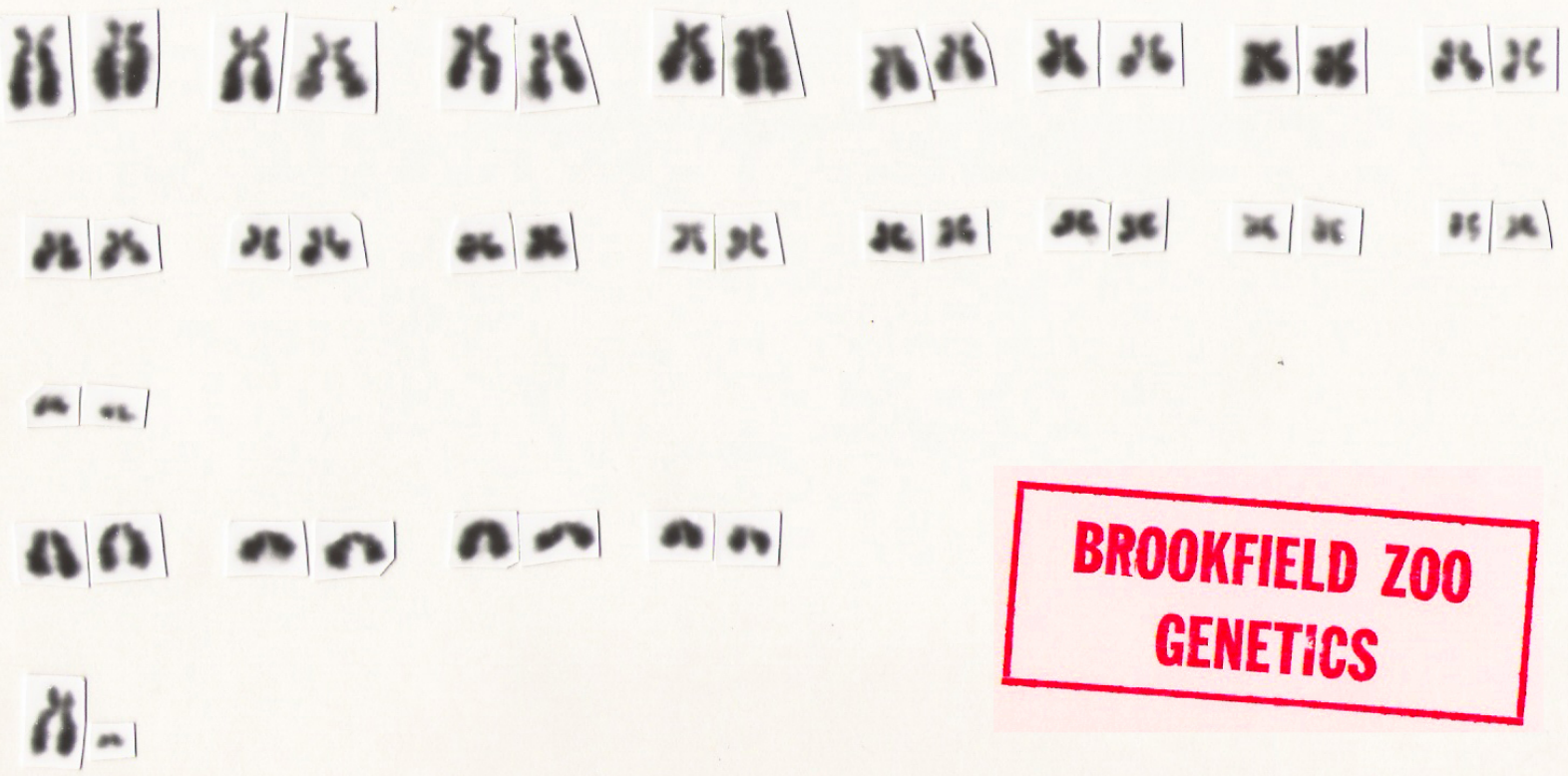


AARDVARK 1 2N=20 FEMALE

AARDVARK 2 2N=22 MALE

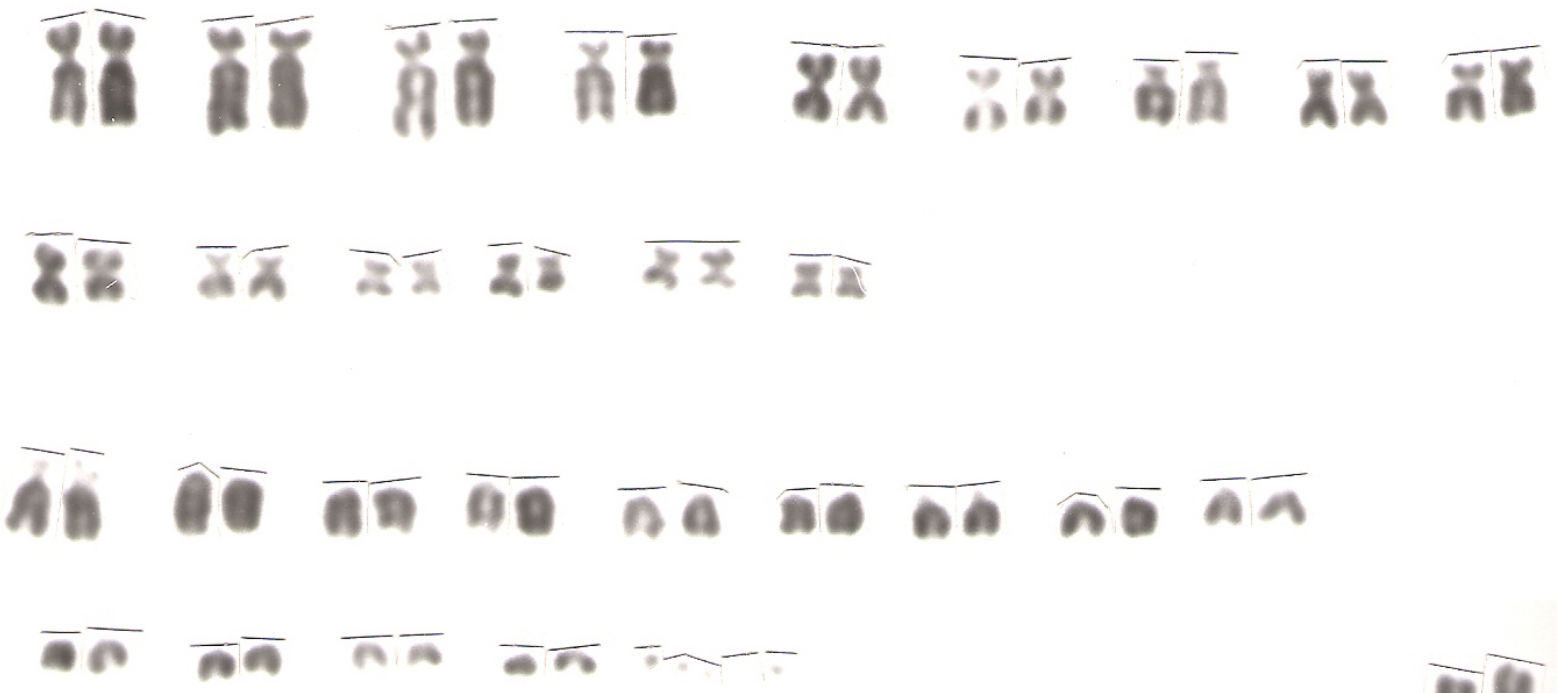


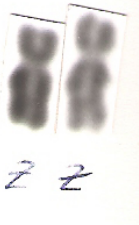
BELUGA 2N=44 MALE



CHIMPANZEE 2N=48 MALE

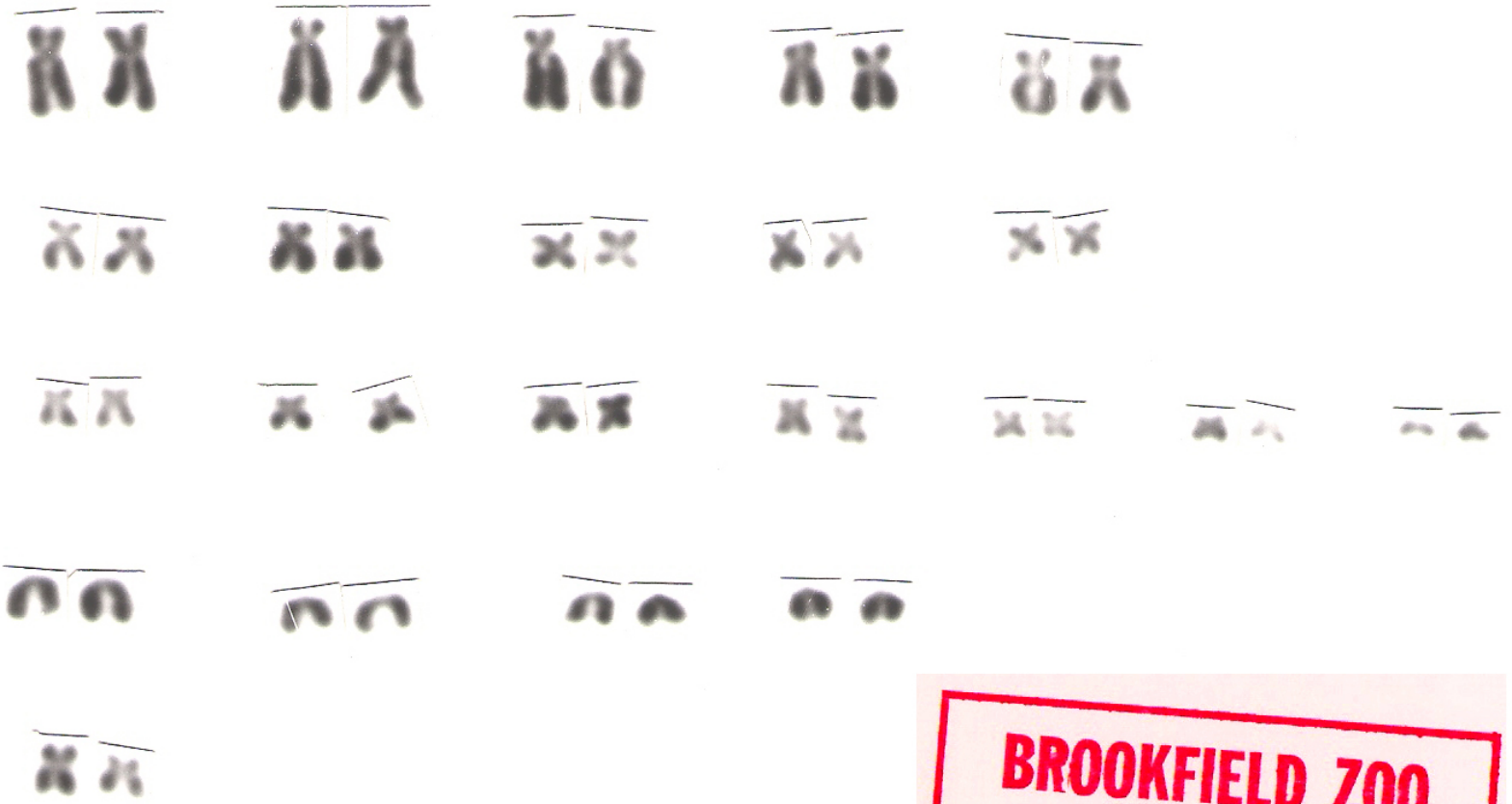
CINEREOUS VULTURE 2N=62 MALE (ZZ)





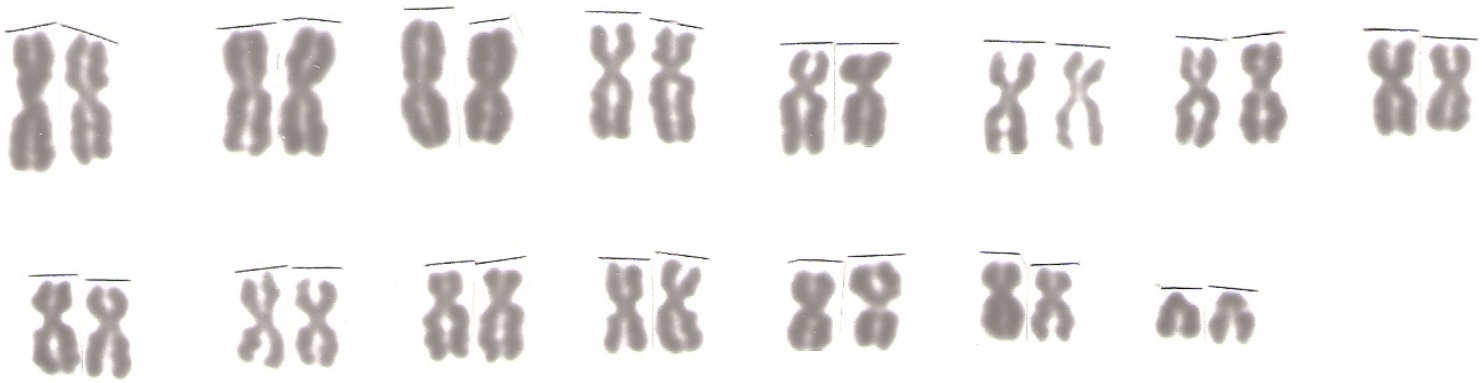
Z Z

BOTTLENOSE DOLPHIN 2N=30 FEMALE



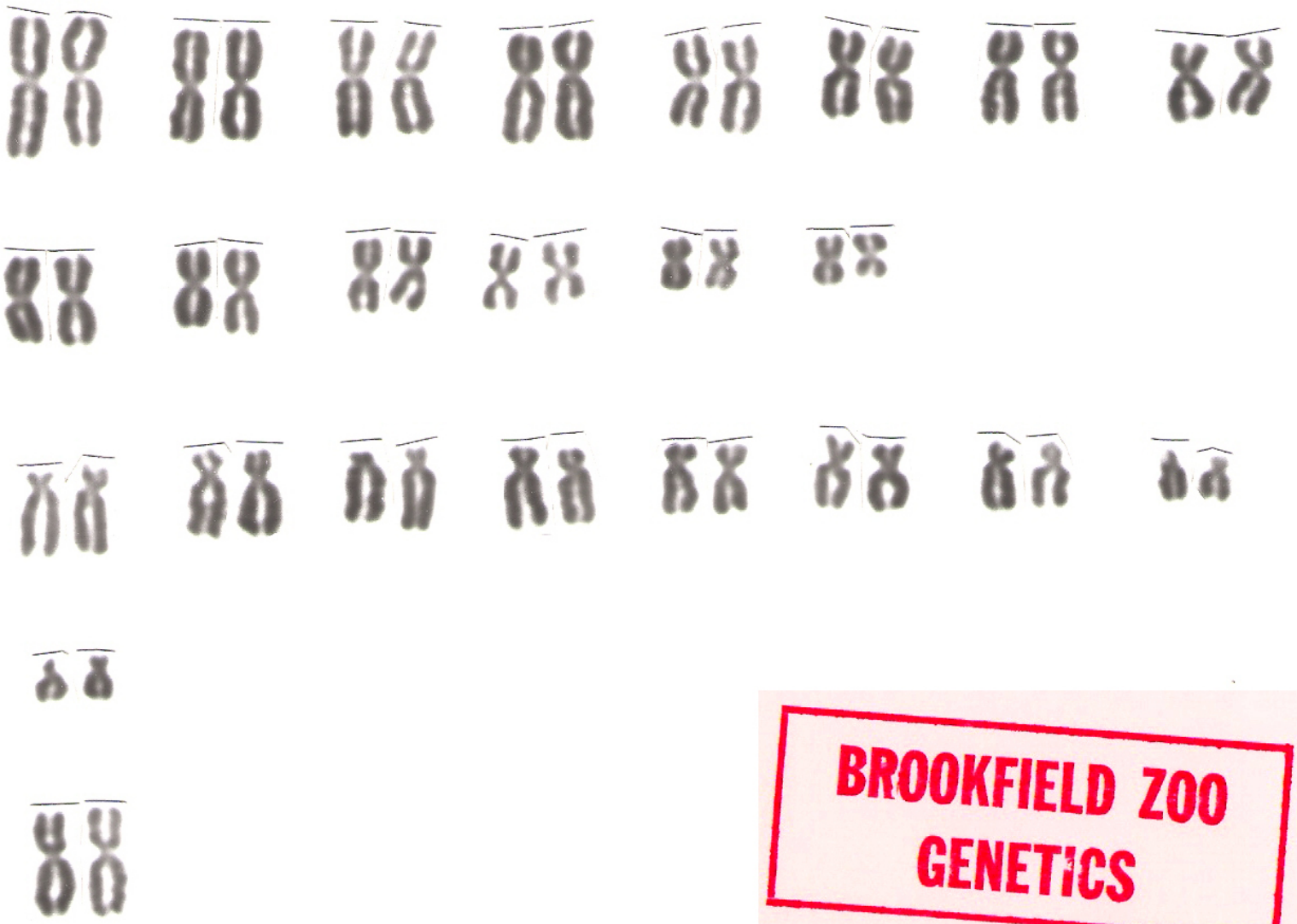
BROOKFIELD ZOO
GENETICS

RETICULATED GIRAFFE 2N=30 FEMALE



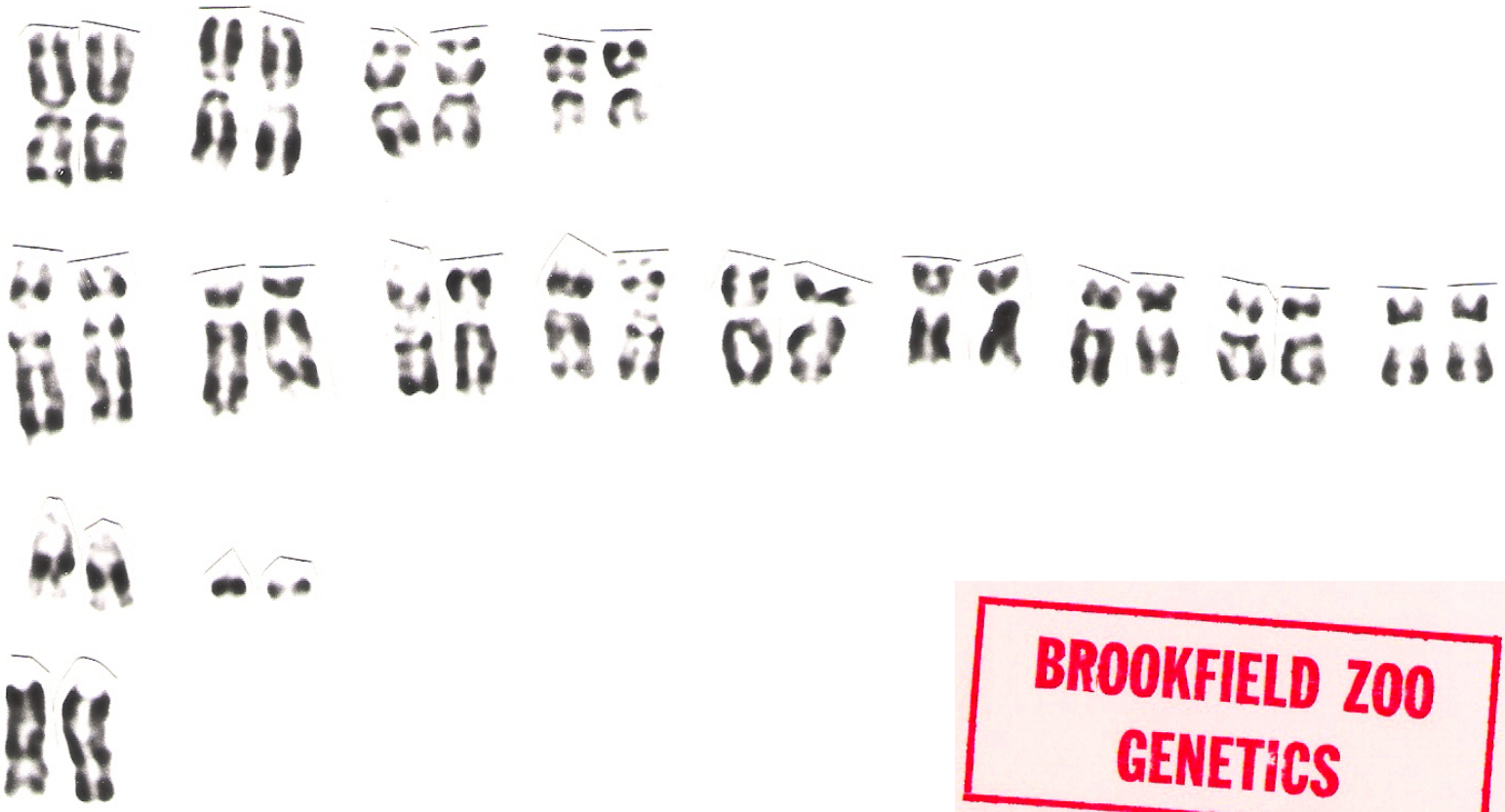
BROOKFIELD ZOO
GENETICS

GORILLA 2N=48 FEMALE

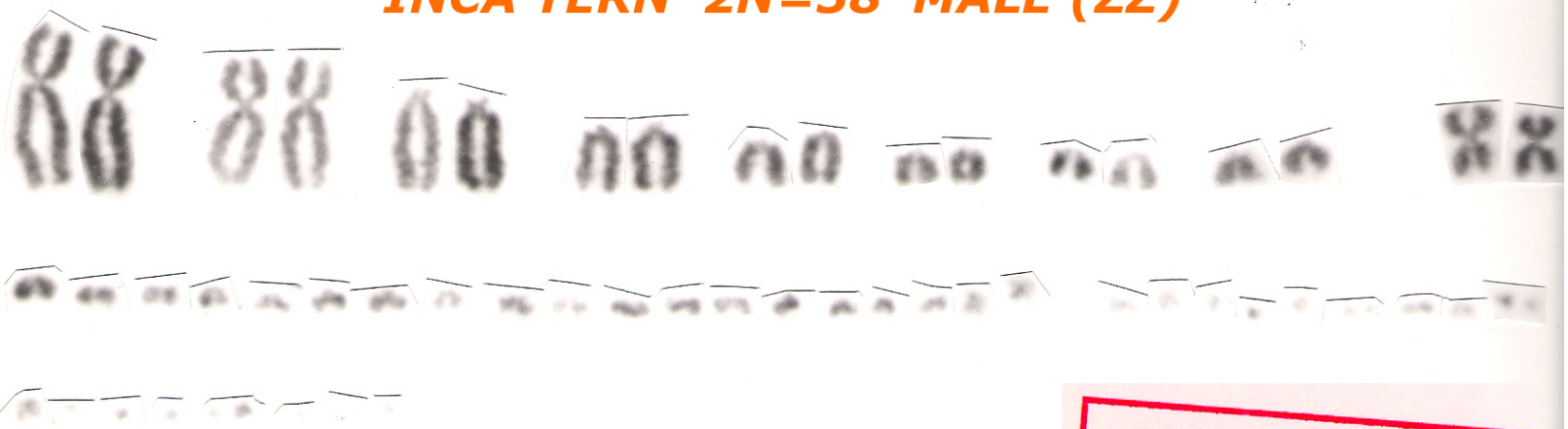


BROOKFIELD ZOO
GENETICS

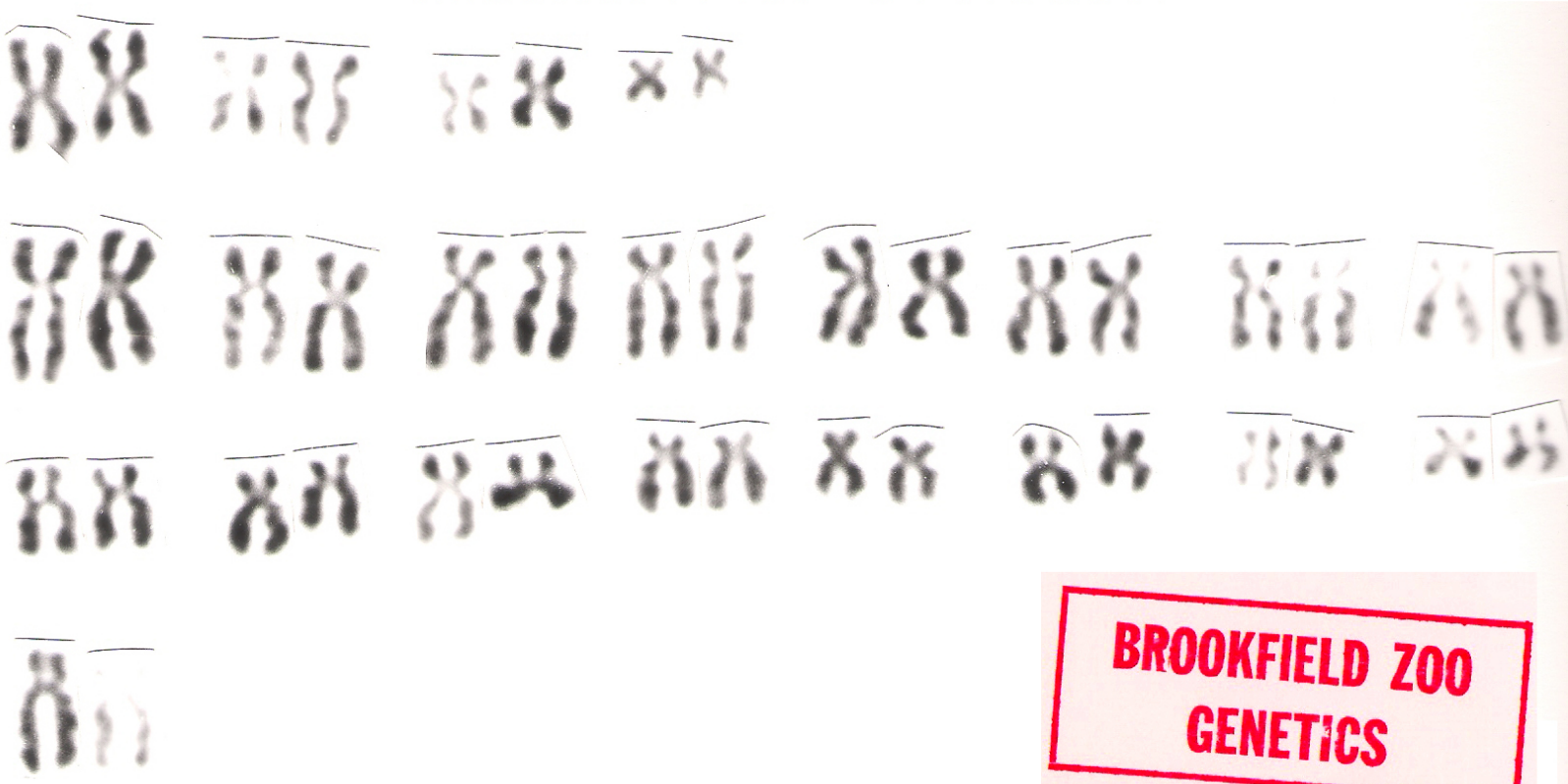
KUDU 2N=32 FEMALE



INCA TERN 2N=58 MALE (ZZ)

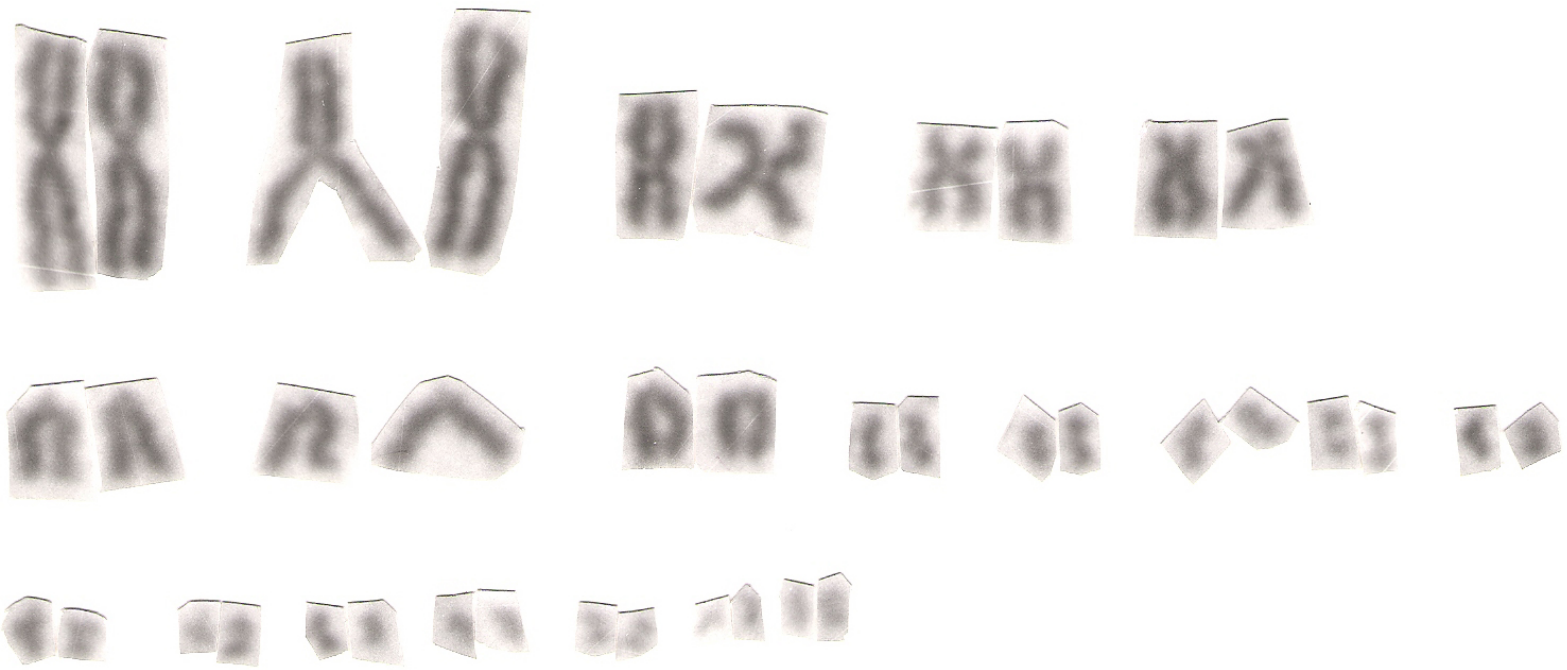


MANDRILL 2N=42 FEMALE

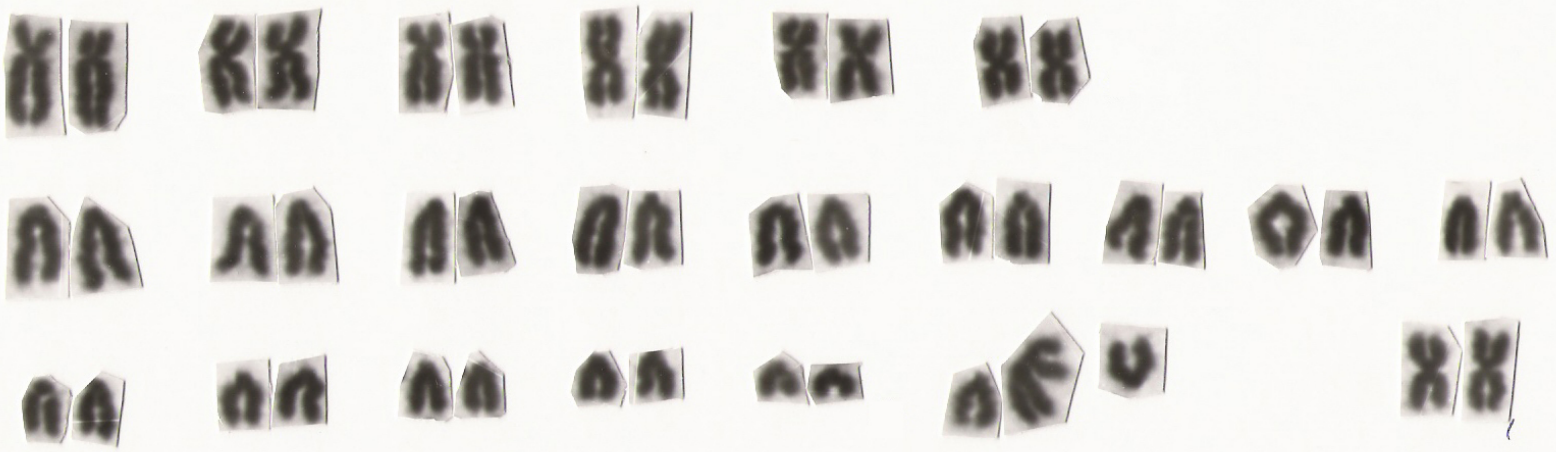


BROOKFIELD ZOO
GENETICS

MONITOR LIZARD 2N=40 MALE (ZZ)



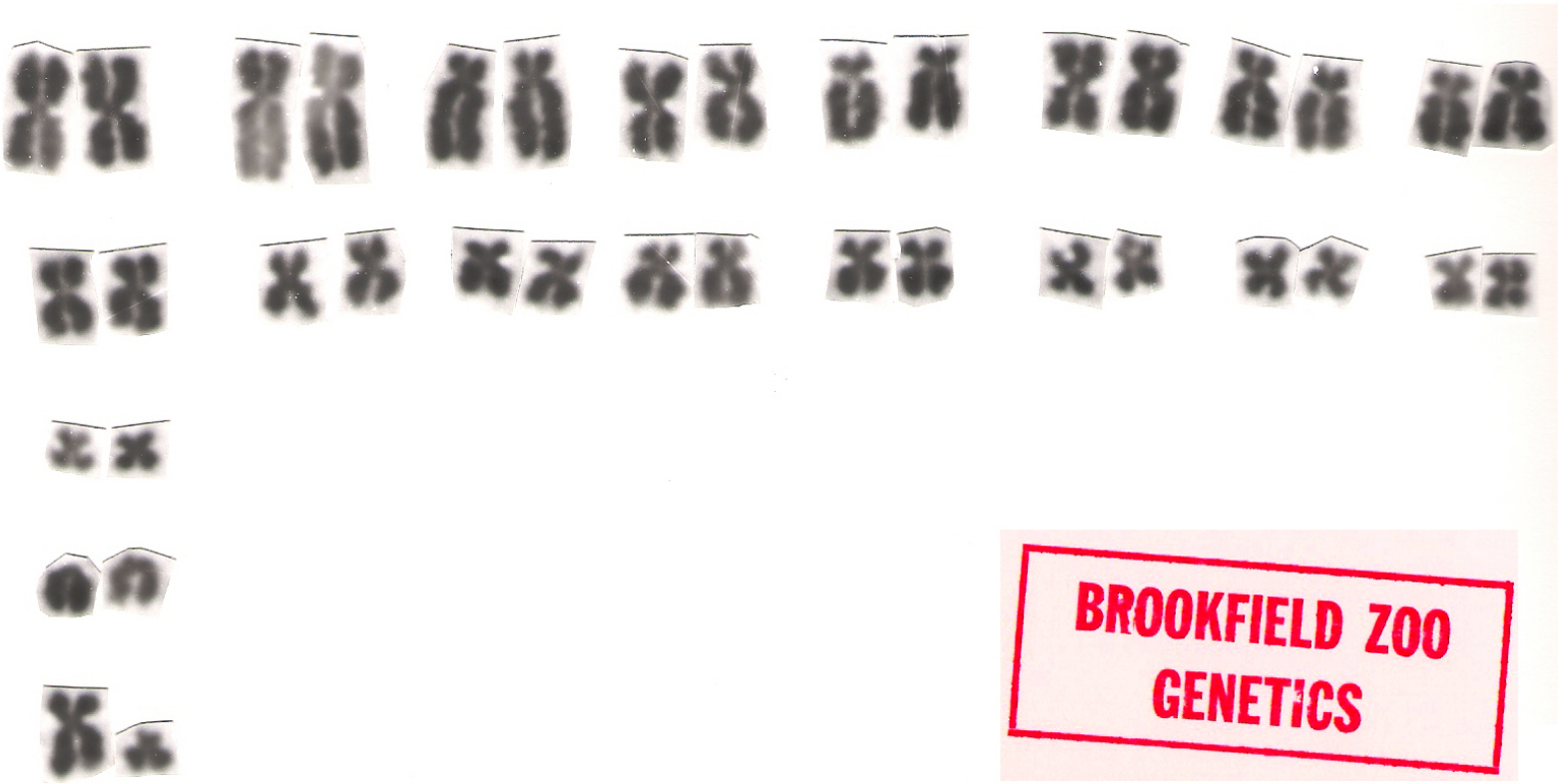
OKAPI 2N=45 FEMALE



BROOKFIELD ZOO
GENETICS

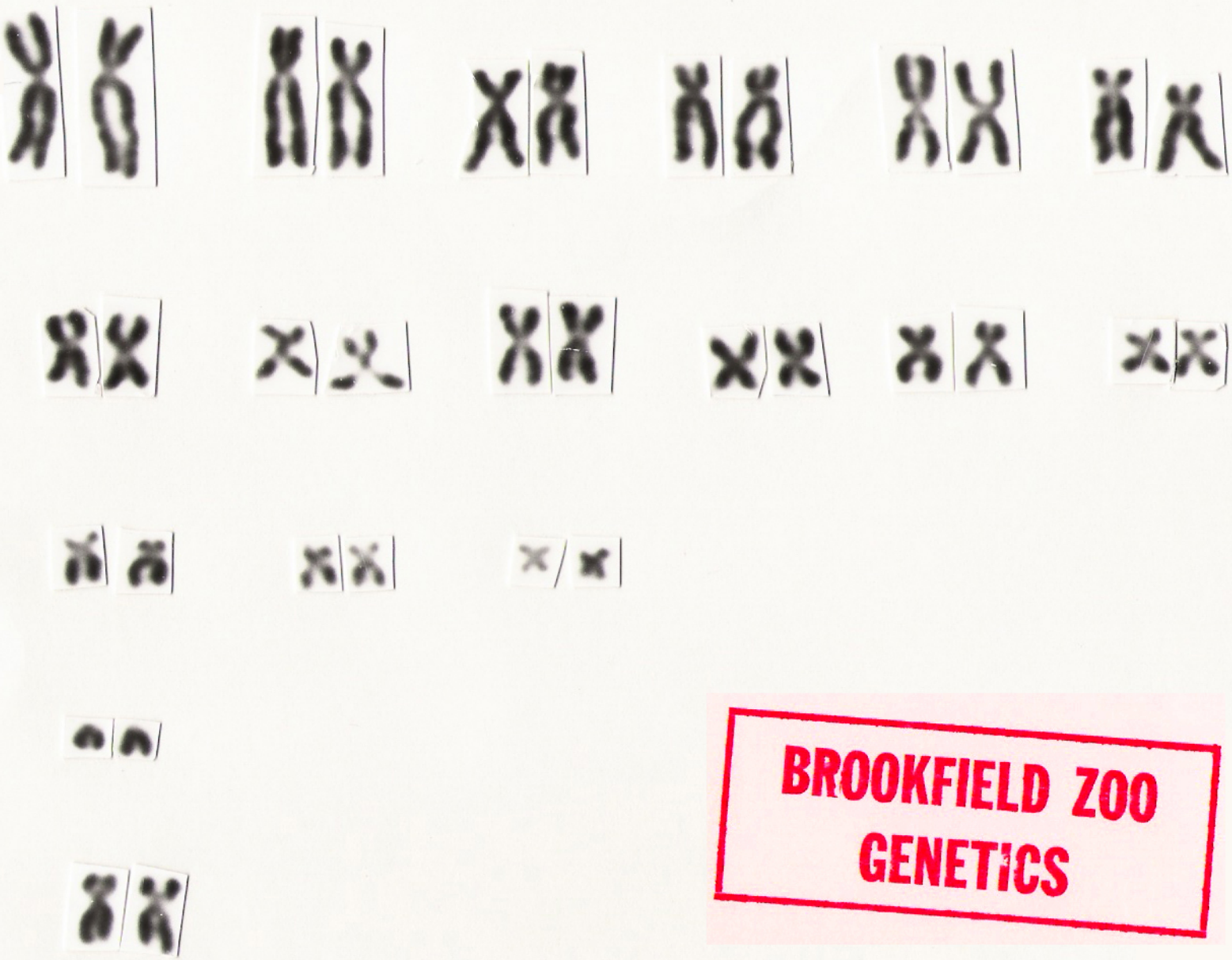
ORANGUTAN 2N=48 MALE

PALLAS CAT 2N=38 MALE

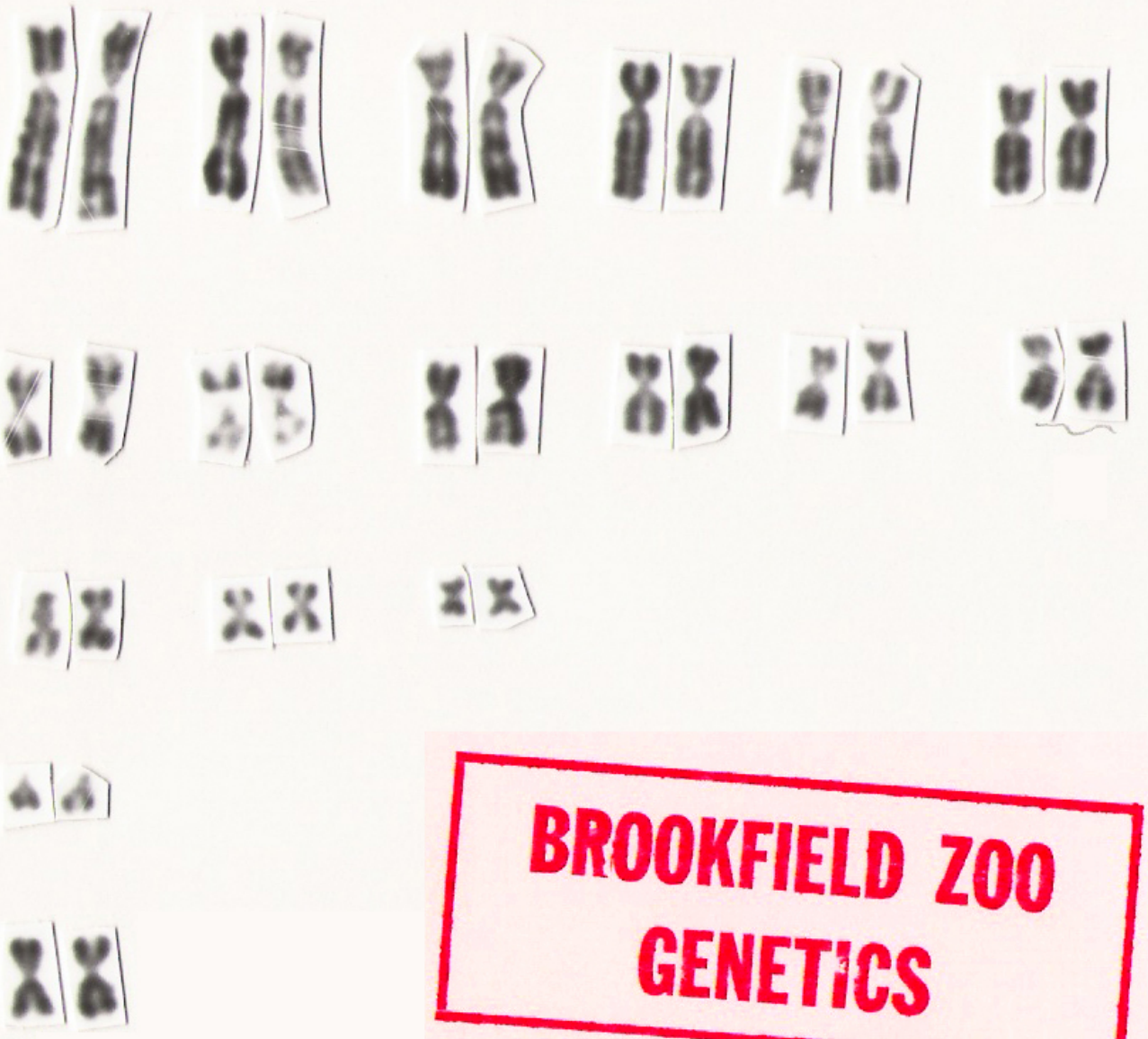


SPIDER MONKEY 1 2N=34 FEMALE

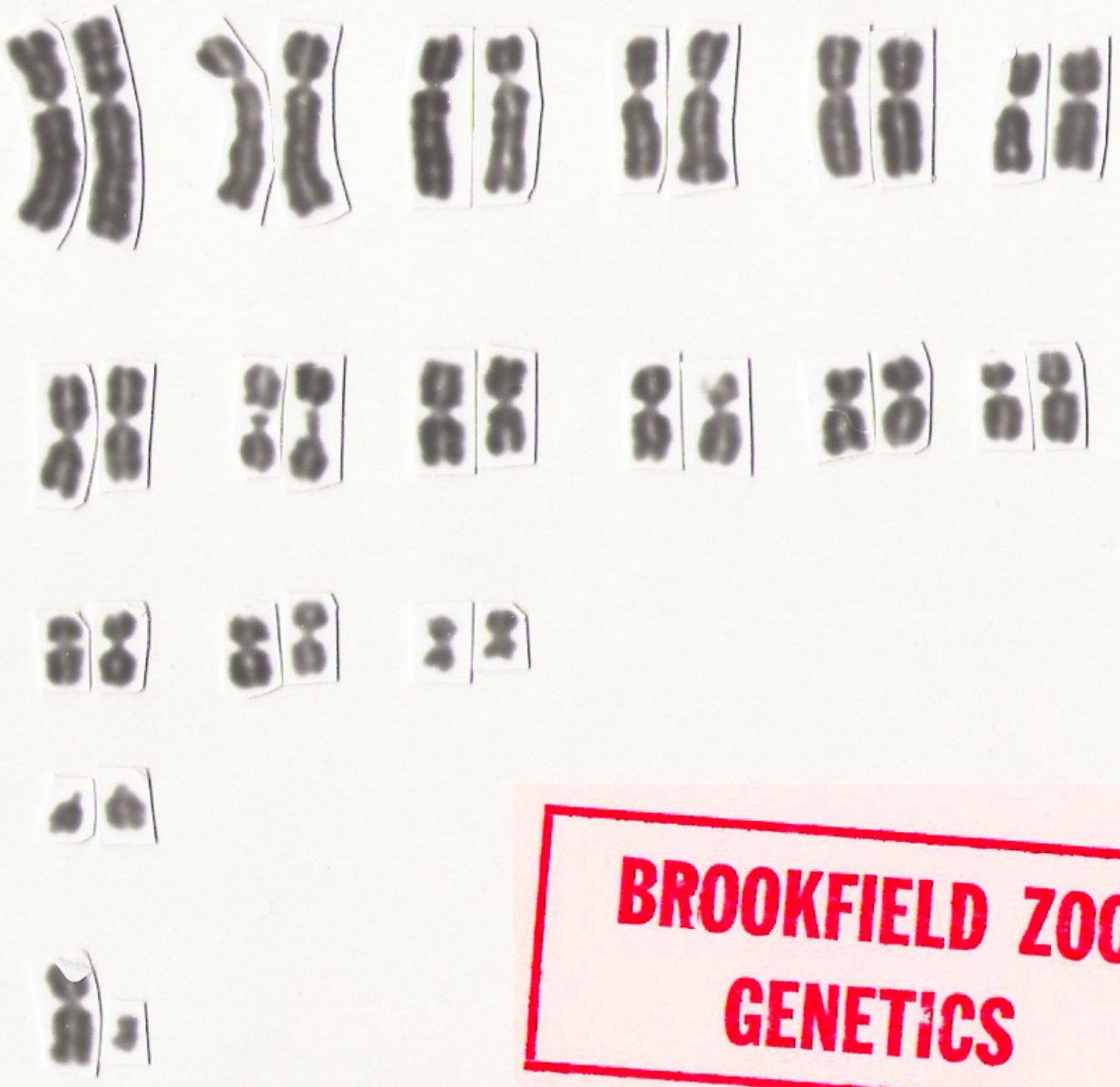
SPIDER MONKEY 2 2N=34 FEMALE



SPIDER MONKEY 2N=34 FEMALE



SPIDER MONKEY 4 2N=34 MALE



SPIDER MONKEY 5 2N=34 FEMALE