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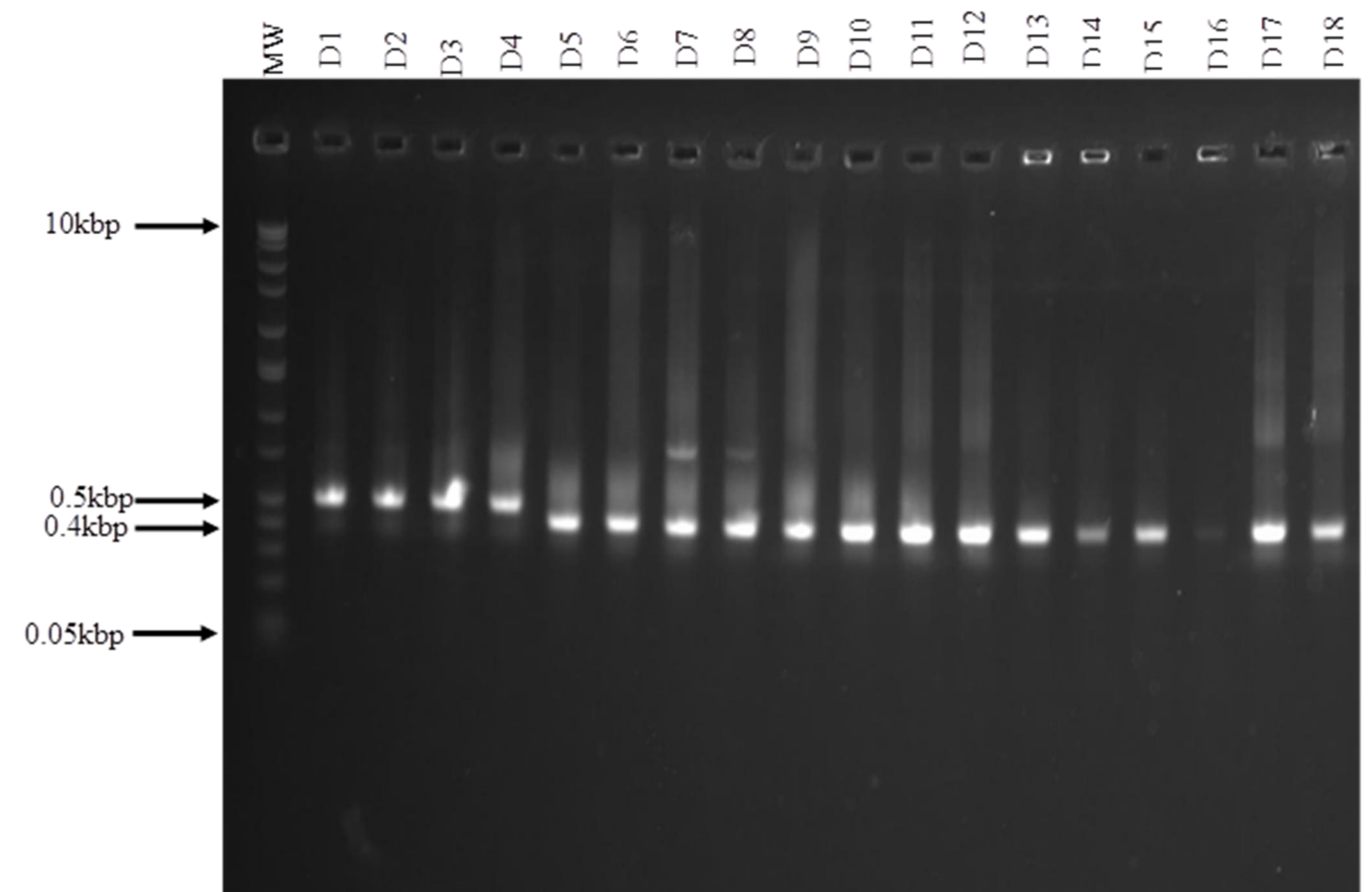
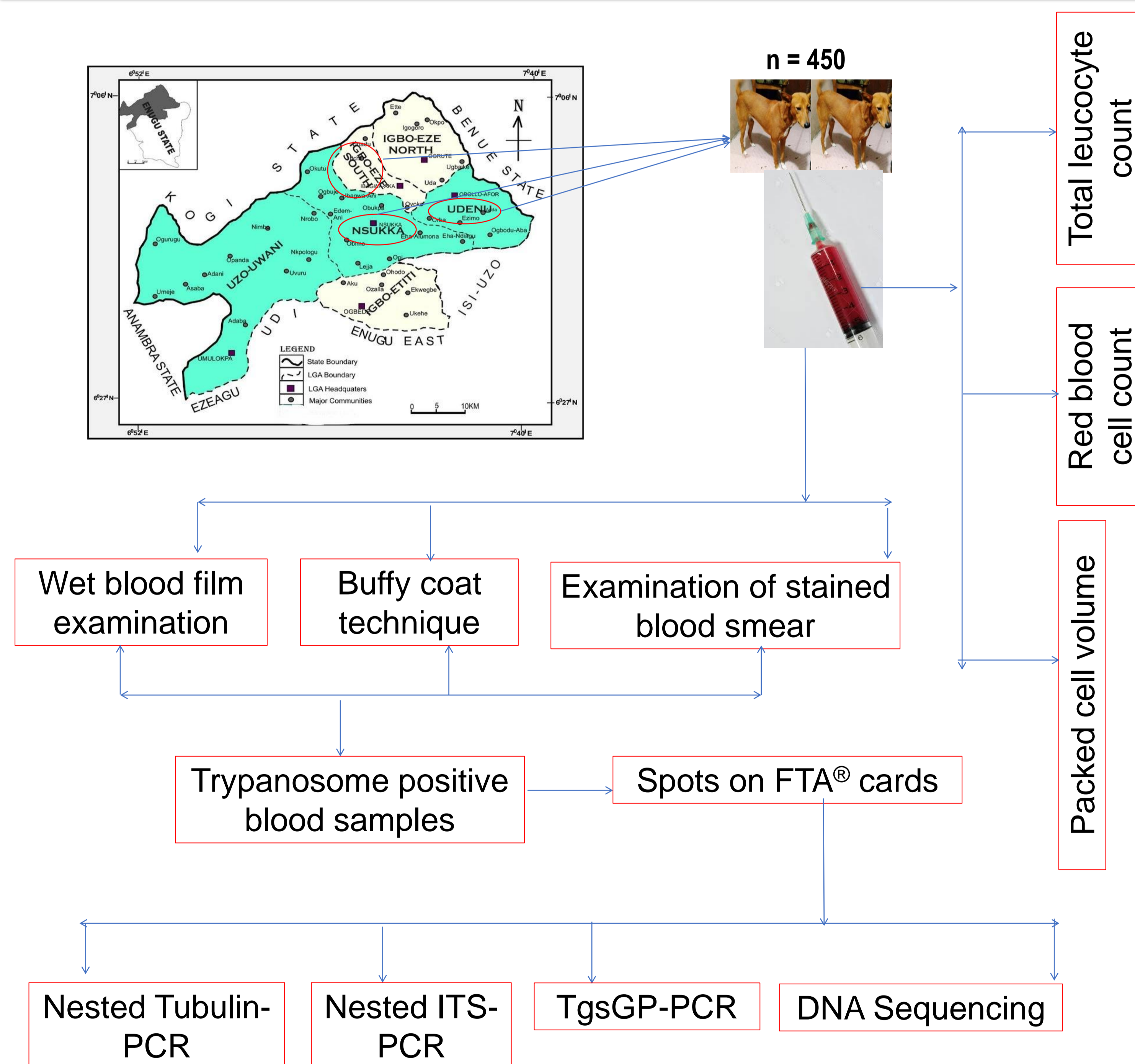
Background

Dogs are of immense social, psychological and economic importance in Nigeria and are severely affected by African trypanosomiasis. However, the prevalence of canine African trypanosomiasis (CAT) in Nigeria is underreported and the identification of the parasites relies mostly on basic morphological characteristics under the microscope, which could be misleading.

Objectives

To determine the prevalence and characterize trypanosomes isolated from dogs in South east Nigeria..

Methodology



T. brucei: 424bp
T. congolense: 486bp
T. vivax: 526bp

Figure I: Representative tubulin-PCR agarose gel electrophoretic plate showing the amplification of some trypanosome species isolated from naturally infected dogs in Enugu North Senatorial Zone, South East Nigeria

T. congolense (forest): 1505bp
T. congolense (kilifi): 1403bp
T. congolense (savannah): 1408bp
T. congolense (tsavi): 951bp
T. brucei: 1215bp
T. simae: 847bp
T. vivax: 620bp
T. theleri: 998bp

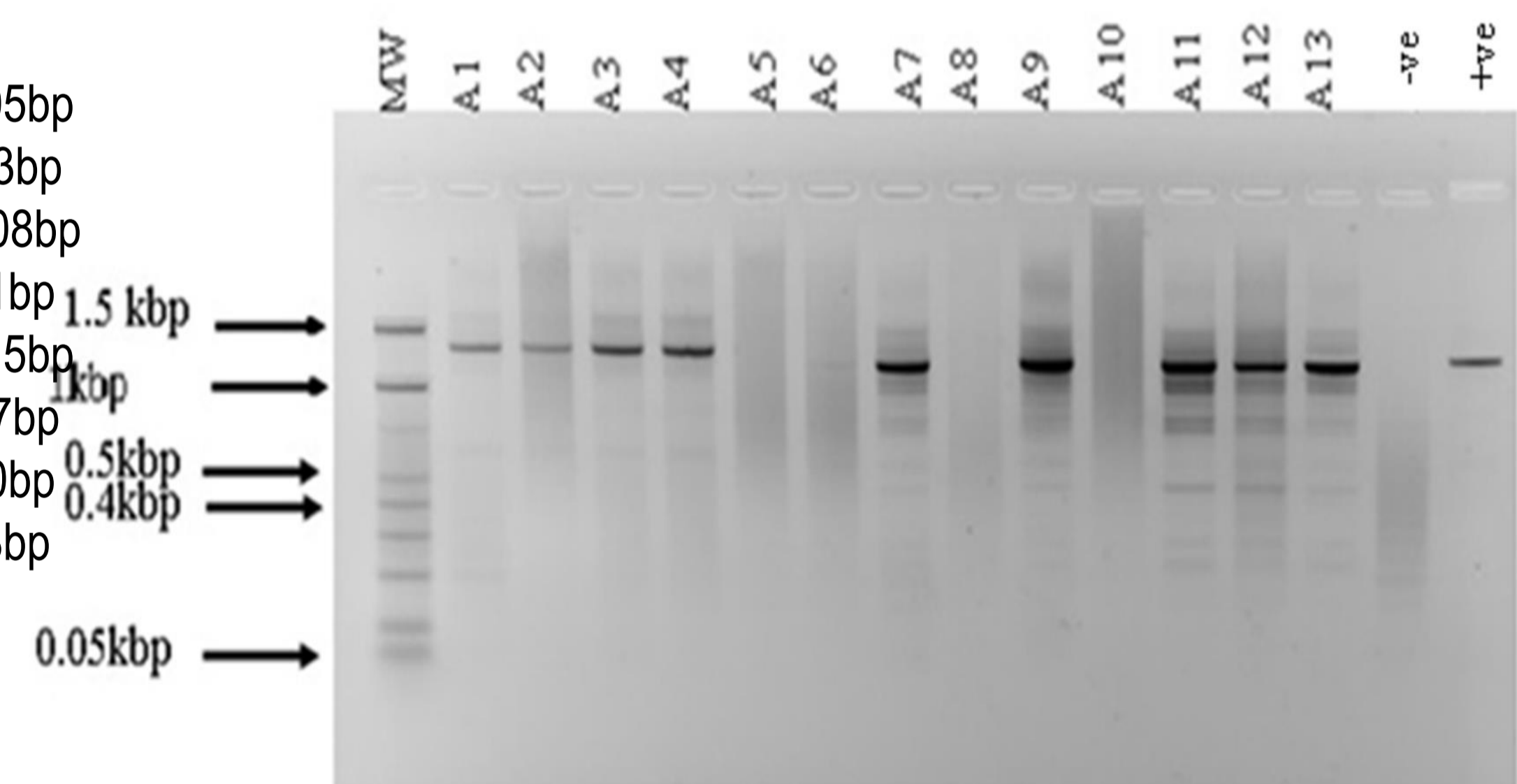


Figure II: Representative ITS-PCR agarose gel electrophoretic plates showing the amplification of some trypanosome species isolated from naturally infected dogs in Enugu North Senatorial Zone, South East Nigeria.

Results

Of the 450 dogs sampled, 51 dogs were positive for trypanosomes with a prevalence rate of 11.3% (95% CI = 0.087 - 0.146). *Trypanosoma brucei* was the predominant trypanosome species infecting dogs in the study area (Figures I & II). *T. congolense*, *T. evansi* and *T. vivax* were also identified. The prevalence of canine trypanosomiasis was significantly associated with season ($\chi^2 = 13.821$, $df = 1$, $P = 0.0001$) and the sampling location ($\chi^2 = 6.900$, $df = 2$, $P = 0.032$) while sex, breed and age were not. The PCV and RBC of the infected dogs were significantly lower ($p < 0.0001$) than those of the uninfected dogs.

Conclusion

CAT due to *T. brucei* is very prevalent in Enugu North Senatorial Zone, South East Nigeria and is associated with haematological changes. *T. vivax* was detected in a dog in South East Nigeria which appears to be the first report of *T. vivax* in a dog in Nigeria.

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